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The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

Published Every Thursday TULSA, OKLAHOMA, JULY 7, 1927 $6.00 a Year

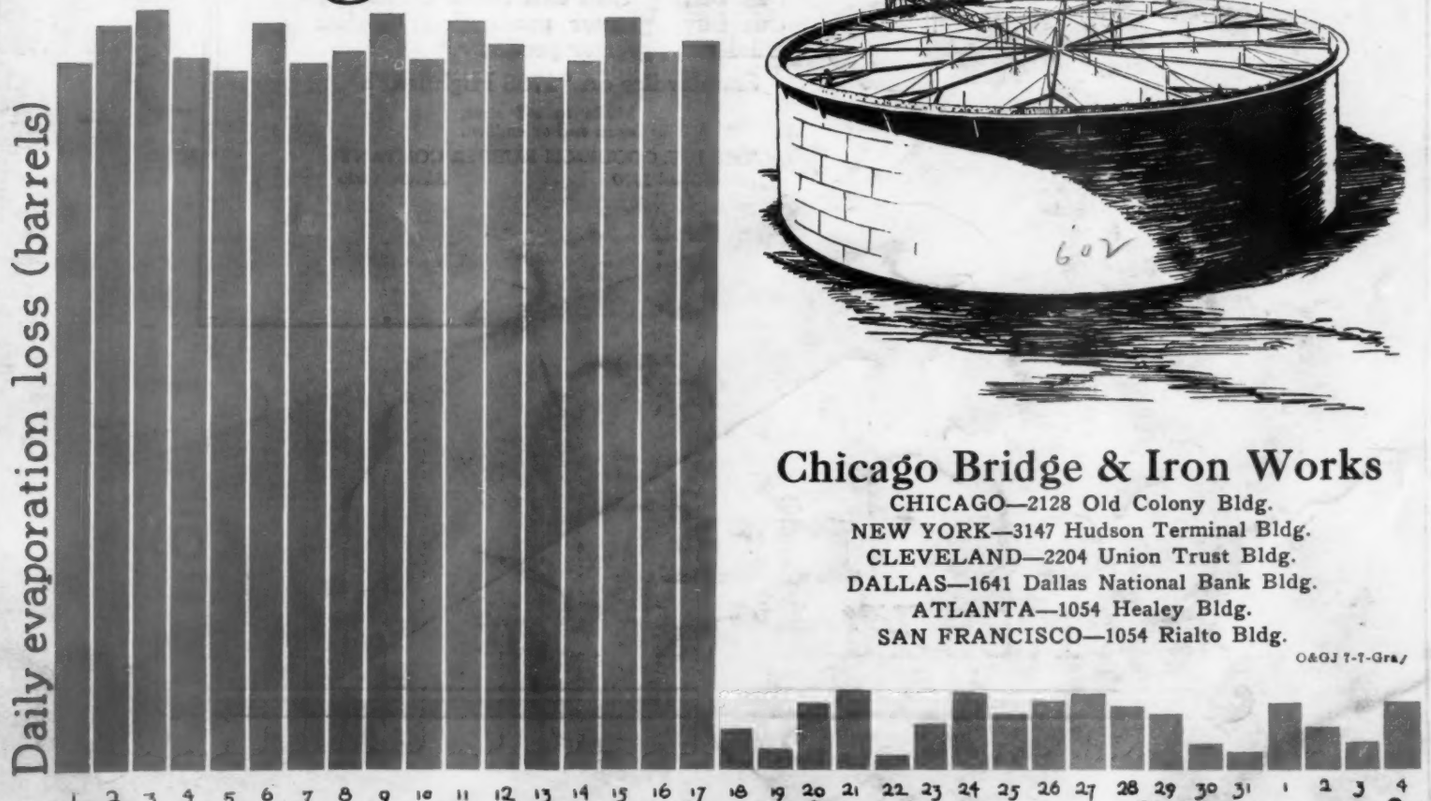
The WIGGINS ROOF

Stops Evaporation Losses

and eliminates the fire hazard in working or storage tanks

It floats on the surface of the oil; keeps air from the oil at all times; and eliminates thermal breathing. It stops splashover during filling and recovers oil entrained in air bubbles.

Simple in construction, applicable to old or new tanks. Ask for new booklet, "Stopping Evaporation."


Daily evaporation loss (barrels)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4
Before Installation of Wiggins Roof — After Installation of Wiggins Roof

Chicago Bridge & Iron Works

CHICAGO—2128 Old Colony Bldg.
NEW YORK—3147 Hudson Terminal Bldg.
CLEVELAND—2204 Union Trust Bldg.
DALLAS—1641 Dallas National Bank Bldg.
ATLANTA—1054 Healey Bldg.
SAN FRANCISCO—1054 Rialto Bldg.

O&GJ 7-7-Gra/

Advertisers' Index on Page 25 Table of Contents on Page 26

THE
JOHN CRERAR
LIBRARY

Production Insurance!

EVERY roll of Goodrich "1788 Highflex" in your storeroom is an asset, representing real dollars of saving in maintenance.

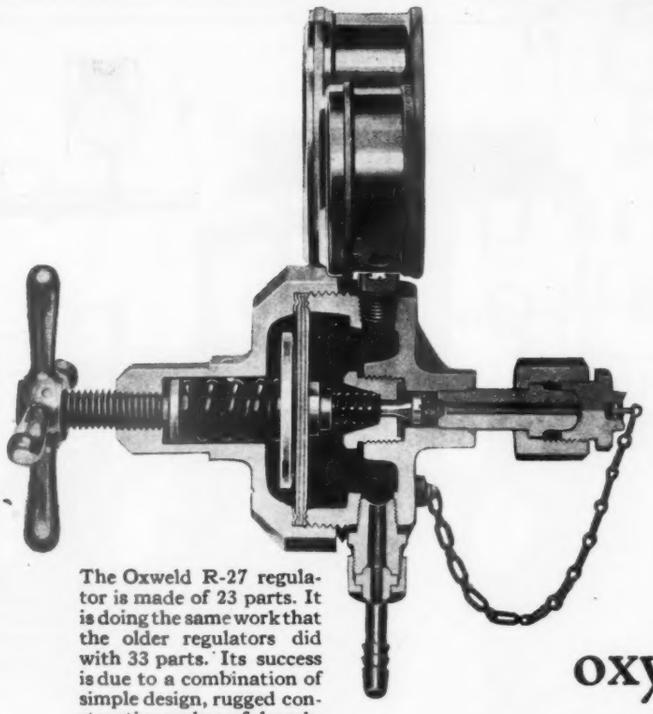
It is, actually, more than just a roll of belt. It contains hidden values that will make themselves more and more evident with passing months of trouble-free service; lower maintenance cost; fewer take-ups; less belt-dressing; fewer fasteners; full power transmission; fewer shut-downs; freedom from stretch; the satisfaction of knowing you have the best belting skill can build or money can buy; greater production; higher efficiency; greater profits.

Standardize on "1788 Highflex"!

Made in all sizes,
open end or endless.

THE B. F. GOODRICH RUBBER COMPANY
Established 1870 Akron, Ohio

Goodrich
"1788 Highflex" Belt



The Oxweld R-27 regulator is made of 23 parts. It is doing the same work that the older regulators did with 33 parts. Its success is due to a combination of simple design, rugged construction and careful workmanship. It is not a nozzle type regulator. It has exceptional flow capacity for this reason and will work without freezing. Several years of service in both high and low temperatures have shown it to be simple, sturdy and reliably accurate.

"Continuous" oxy-acetylene regulation

THE AVERAGE MECHANIC can take the Oxweld R-27 regulator to pieces, put in new parts and completely reassemble it in a few minutes.

This sounds like a trick stunt, but it isn't. It illustrates dramatically the simplicity of design of these gas regulators for oxy-acetylene welding and cutting.

Just think it over. After a certain period of service the regulator seat needs to be replaced. That's what happens in any regulator. It usually happens at a time when it is most inconvenient. Yet with the R-27 regulator you can have a reconditioned unit in a few minutes, at a cost of a few cents. In fact, the whole "inside works" costs only $3.60.

Unless you like to have your mechanics spending time on tools instead of productive work, Oxweld R-27 regulators are an economy that you can not overlook.

The R-27 regulator is a typical piece of Oxweld equipment. Oxweld customers need no other recommendation.

OXWELD ACETYLENE COMPANY
Unit of Union Carbide and Carbon Corporation

UCC

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Oxweld

WELDING AND CUTTING APPARATUS

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at th e postoffice at Tulsa, Okla., under the Act of March 3, 1879.

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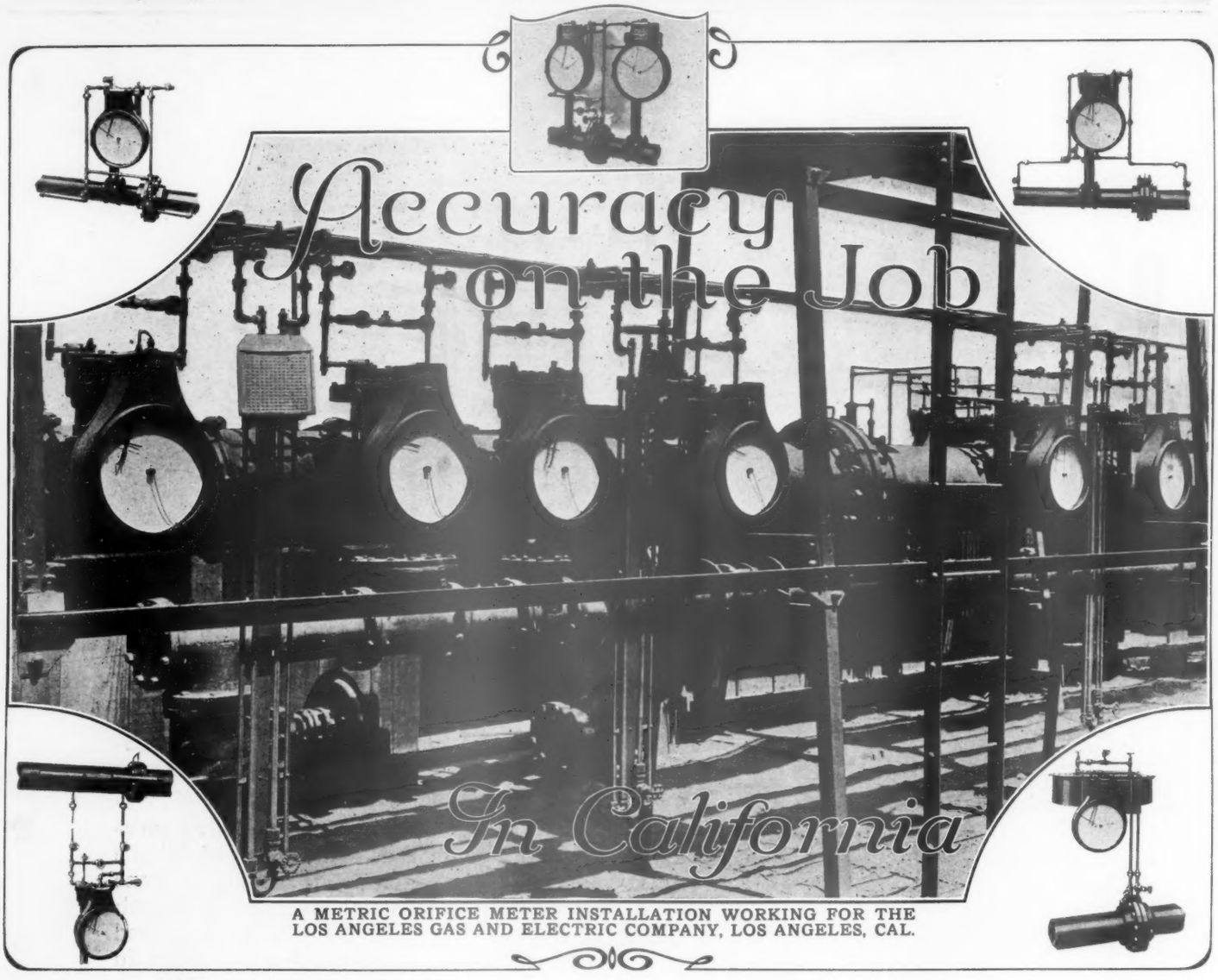


A METRIC ORIFICE METER INSTALLATION WORKING FOR THE LOS ANGELES GAS AND ELECTRIC COMPANY, LOS ANGELES, CAL.

Orifice meters are used in hundreds of different ways to measure gases and liquids. They are put to a remarkably wide variety of uses. Their simplicity allows their adaptation to every measuring purpose. Their accuracy has put guess work and rough approximations out of style. Every modern plant with a measuring job needs metric orifice meter dependability.

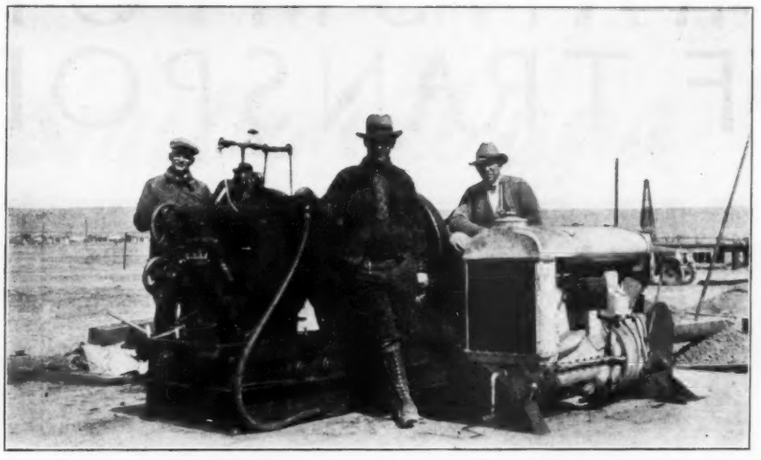
WESTCOTT & GREIS
Sales Service
Dallas TULSA Los Angeles

METRIC METAL WORKS
of the American Meter Company-Inc.
ERIE - PENNSYLVANIA - U-S-A

METRIC orifice METERS

PUT *SURE* IN MEA*SURE*MENT

On The Firing Line



These photographs show a 12″ Landis Pipe Threading Machine, owned by the Marland Refining Co. in service a long way from a power line. The machine is being driven by a Fordson Tractor.

Regardless of the location and the convenience of power, it is necessary to have the Landis on the job if well formed, full tapered threads are to be produced. That the Marland Refining Company knows the importance of having a Landis on the job is well evidenced by these pictures.

Many oil producing companies have installed Landis Pipe Machines particularly to meet the A.P.I. Standards of threads. It is well known that the Landis Chaser is the only threading tool that will cut a full tapered thread at all times. This is because the chaser is ground on the cutting edge and *not* in the throat. Each grinding gives the effect of a brand-new chaser. The contour is not changed. Therefore a full tapered thread is produced whether the chaser is new or about worn out.

Follow the practice of the big oil companies who buy on a basis of efficiency and economy. This policy is best whether your requirements are many or few. This practice means good threads and profits.

Write us your requirements today.

LANDIS MACHINE COMPANY
Waynesboro, Pennsylvania

Detroit Office:
5928 Second Blvd.

TRANSMIGRATION OF TRANSPORTATION

FLIERS KNOW

Air transport . . . new day travel . . . speeds that annihilate distance. Airplane motors demand a fuel of high volatility, quick starting and even burning.

The ideal aviation gasoline, as proven by exhaustive tests, is that carrying a high percentage of NATURAL GASOLINE, which furnishes the non-detonating, highly volatile, more powerful, even-burning elements to the fuel.

CHESTNUT & SMITH
CORPORATION
Tulsa, Oklahoma

There's a Smith oil and gas separator for EVERY PRODUCTION CONDITION

for Air and gas lift

for high pressure

for low pressure

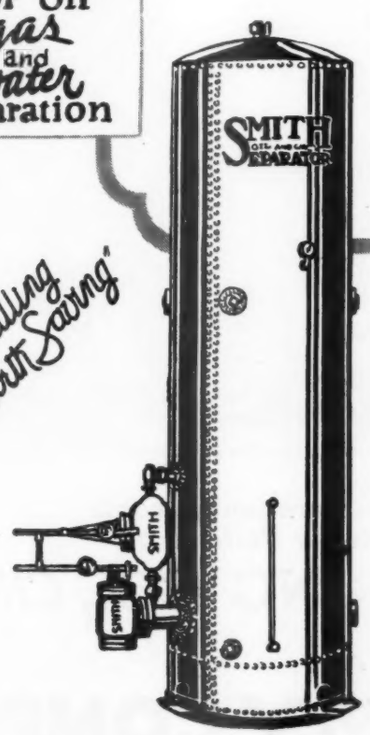
for oil gas and water separation

for pumping wells

For high pressures—low pressures—for air and gas lift—for pumpers and for every production condition you may be confronted with, there's a Smith Oil and Gas Separator that will meet your production conditions.

Keeping pace with the demands of the Oil Industry our engineers are constantly working to meet unusual conditions with equipment that will solve your problems.

Our new air and gas lift types have created unprecedented interest. *Ask for new Bulletin.*



"If it's worth Drilling for, it's worth Saving"

SMITH SEPARATOR COMPANY

Tulsa Okla.

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"MAKING BETTER TIME with Less Expense"

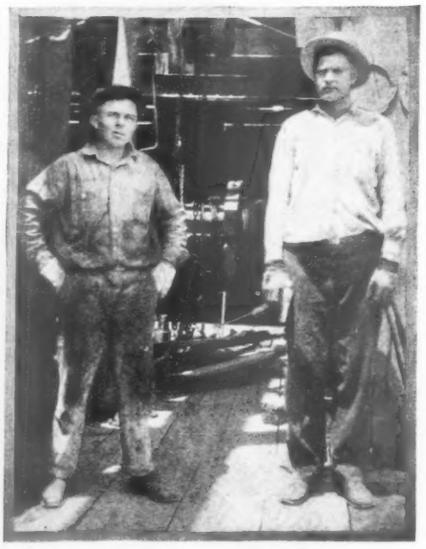
Magnolia No. 1 Miller N.E.—S.E.—N.E. 35-4S-2E—Carter Co., 3½ Mi. E. Ardmore.

CLIMAX *Trade Mark Reg. U.S. Pat. Off.* DRILLING UNITS

Photo at left—A. W. (Bill) Shira, Tool Pusher, Magnolia Petroleum Co., Graham, Okla. Shira says he has four wildcats in Ardmore-Graham districts. Says he is *making better time at less expense* with Climax jobs.

Photo below—Dick Allison, Driller, left, and Sam Cox, Tool Dresser, right. Allison says, "It is remarkable how you can get *same drilling motion as with steam.*"

Photo at right—Geo. Dawson, Driller, right, and Roy Modisette, Tool Dresser, left. Dawson says, "Climax *handles casing with remarkable success* and driller has complete control of pipe all the time. Is excellent on fishing jobs. Tool can be pulled steady and slow when bringing out two strings."



For full description and further performance records of Climax Drilling Units, write for Bulletin H

Made by* CLIMAX ENGINEERING CO., *Clinton, Iowa

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THE NATIONAL SUPPLY COMPANIES

Exclusive Foreign Oil Field Distributors:
The National Supply Corporation
120 Broadway, New York, N.Y.
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Nye Bit Brace Reamer

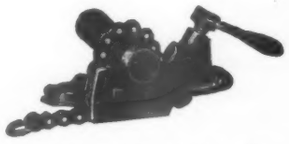
Reams from ⅛ to 1¼ inches inclusive.
NET PRICE $1.17
ABSOLUTELY GUARANTEED

Nye Chasers

Fit Nos. 1-1A and 2 Nye Receding Die Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.

No. 1, 1" to 1⅛"	$ .75 per set net
No. 1, 2"	1.25 per set net
No. 2, 2½" to 4"	3.60 per set net



Nye No. 51--Chain Vise

Capacity ⅛ to 2½ inches

A handy, compact little vise, possessing maximum strength, while of minimum weight. Easily carried in tool kit. Equipped with standard jaws. Having features not found in similar vises, the double lever tightening device being above the bench, rather than below, insuring faster and smoother operation.

NET PRICE $4.67
ABSOLUTELY GUARANTEED

Nye Saunders Pipe Cutters

No. 1	$ 1.80 net
No. 2	2.70 "
No. 3	6.60 "
No. 4	10.80 "
No. 5	16.80 "

A LETTER FROM HARRY G. NYE

To the Oil Men of the U. S. A.

Fellow Citizens:

I am on my way to the dentist, as soon as I get this letter written, so don't pay any attention to how I look or what I say. Business is good, I haven't any family trouble, that is any more than usual, but I am on my way to the dentist.

A dentist is a plumber who puts on a collar and a white kimono and opens a shop on the second floor instead of in a back room or in a basement. He calls himself a D. D. S., but at heart he is still one of us. He is a plumber nevertheless. If a chafing-dish is a skillet with a college education, a dentist is a plumber with the same thing. He wanted to be a plumber without having to get under the sink. So he thought of this dentist idea, and I'll say it is a good one.

The first thing a dentist does when you visit him is to go over the property and see if he can find any cavities, or make some. He takes a crowbar and pokes around in all the dark corners and digs up a lot of nerves that, if it hadn't been for him, you would never know you had. Then he decides to drill, for fear he may have missed some. He takes about a three-eighths inch bit and hooks it up with a scrollsaw that he got from the Youth's Companion when he was a kid for six new subscribers and $1.20 for postage and packing.

Of course, if he is a real up-to-date dentist he has an electric motor. This is much better, as it gives the machine more power, and also leaves the dentist free to work on your face with both his feet and his hands. He drills around until you wish he'd blast and have it over with, but at last he gets a hole big enough for you to fall into, and then he says, "Come back at two o'clock three weeks from last Thursday." Doesn't put on a manhole cover nor anything.

So you go away with a hole in your jaw that, I say, isn't safe, and really ought to have a red light on it or something. Then at about one-thirty-seven A. M. you wake up and decide that somebody has put the red light there. Yes, sir, these gentlemen plumbers can stir up more sore places that a man never knew he had, and then leave them wide open for the public to fall into, than any ordinary plumber ever did laying seven hundred miles of main.

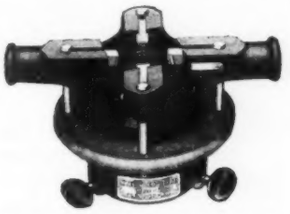
Yes, I am on my way to the dentist's office. Maybe I'll write and tell you how I come out; if I ever do. If I don't remember that I have a family, and that I have left the business to them, and that Nye tools give perfect satisfaction. As a matter of fact they do as neat a job as any dentist who ever tunneled a tooth, and it won't cost you near as much money. They work faster and easier, and last longer, than any other pipe-cutting tools on earth.

Yours, no matter what happens,
HARRY G. NYE.

Copyright, 1927, by
HARRY G. NYE
All Rights Reserved

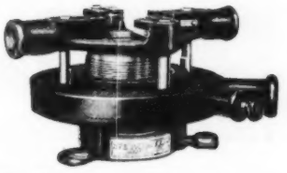
Otherwise Known as
THE NYE TOOL & MACHINE WORKS
4120-30 Fullerton Ave., Chicago, Ill.

Nye thin blade cutter wheel, made to fit all standard makes of pipe cutters, and guaranteed against breakage in use. Made both in smooth and knurled edge.



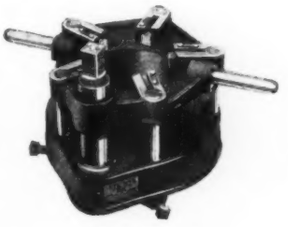
The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe Threader, complete ..... $9.60 net
West of Rocky Mountains $10.80



The No. 1A is the same as the No. 1 except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe Threader, complete ..... $12.00 net
West of Rocky Mountains $13.50



Nye No. 2 Geared Threading Device

Improved

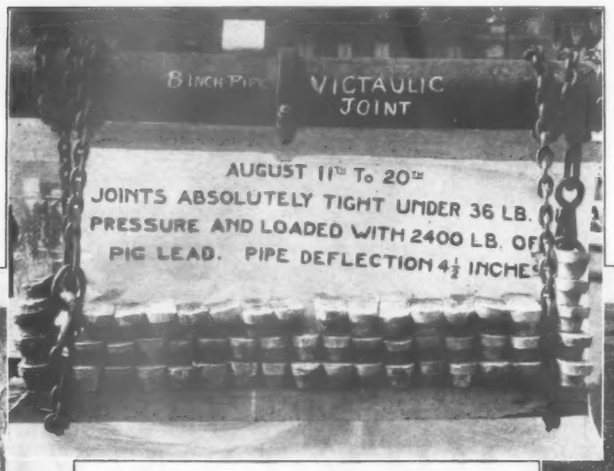
Capacity 2½ in. to 4 in. inclusive. This tool has the same rugged construction as the No. 1 and No. 1A Nye Receding Stocks. A ratchet handle and a spider hub threaded for 1-inch pipe is furnished as standard equipment.

Net price complete $50.00
West of Rocky Mountains $5.00
FREE TRIAL—ABSOLUTELY GUARANTEED

Nye Barnes Pipe Cutters

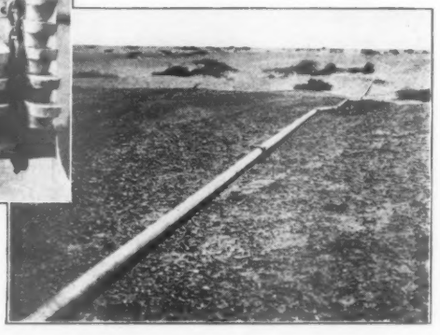
No. 1	$ 2.25 net
No. 2	3.00 "
No. 3	5.00 "
No. 4	10.00 "
No. 5	15.00 "
No. 6	20.00 "

2" gas line laid at the rate of a joint a minute from Parson Pool, Texas.


VICTAULIC
JOINT
AUGUST 11TH TO 20TH
JOINTS ABSOLUTELY TIGHT UNDER 36 LB.
PRESSURE AND LOADED WITH 2400 LB. OF
PIG LEAD. PIPE DEFLECTION 4½ INCHES

Part of a nine-day test of Victaulic Couplings by Consolidated Gas Co. N. Y.

6" Victaulic-coupled oil line—laid at the rate of a joint in 2 minutes — in South America.

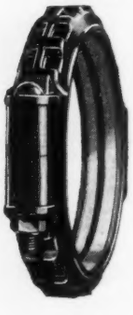


The All-Purpose Victaulic Pipe Coupling Sets New Standards

For detailed information and list of uses and users write for Victaulic Bulletin No. 1.

NEW standards for speed, ease and economy in pipe line installation—permanent, leak-tight joints fitted by ignorant, unskilled labor at an average speed of less than two minutes per joint—that's what Victaulic Couplings mean.

Pipes do not have to be in exact alignment for coupling with Victaulic Couplings—saving much time and expense for handling and excavation when the line is laid over-ground or in a curving trench. A wrench is the only tool needed.



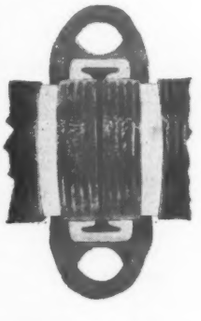
As *straight line couplings* Victaulic Couplings have exceptional strength.

As *flexible joints* they allow approximately five degrees deflection.

As *expansion joints* they take up contraction and expansion of the pipe lengths over a wide range of temperature changes.

Victaulic Couplings are leak-tight at all pressures from vacuum to over two tons per square inch. They are shock-absorbing joints and are not affected by vibration, line-sag or shifting, even when under pressure.

Thousands of Victaulic Couplings are in service on crude oil lines, gasoline lines, natural and manufactured gas lines, on mine water and municipal water lines, on sewage systems, ammonia and acid lines, on compressed air lines and on vacuum systems.



They are supplied in all sizes from ¾" up for steel, wrought iron and cast iron pipe. They are all-purpose joints for every joint on the line.

VICTAULIC COMPANY
OF
26 Broadway AMERICA New York

Texas, Mid-Continent and California Distributors

SMITH SEPARATOR
COMPANY
Tulsa Okla.

The all-purpose pipe coupling

VICTAULIC
REG U S PAT OFF

"For every joint on the line"

Flexible Leaktite Pipe Couplings

FOR CRUDE OIL, GAS, WATER, SEWAGE, COMPRESSED AIR, ETC.

"It's tested chain will stand the strain"

Try the "Vulcan" on tool joints!

"It's the one best bet on a tough job"—that's what actual users, from boss to "roughneck," say of WILLIAMS' "VULCAN" Back-Up Tongs.

Short, sturdy handle—just long enough for the rotary.

Light weight compactness—easy to operate. Rugged, sturdy strength—every part guaranteed.

Proof-tested, CERTIFIED chain—extra size for ample bearing.

Through bolt and U. S. nut fastening jaws to handle.

Grip instant and positive—ready release.

The Genuine WILLIAMS "VULCAN" has stood the test of roughest service. Give it a chance to work for you. Literature?

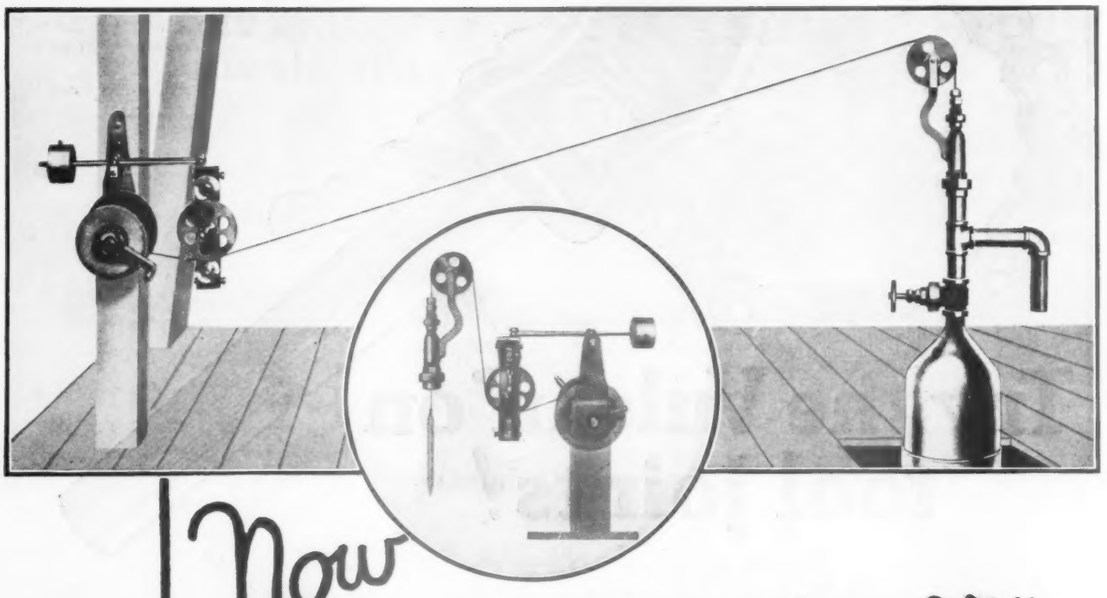
J. H. WILLIAMS & CO.

"The Wrench People"

New York BUFFALO Chicago

GENUINE
WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"VULCAN"
BACK-UP TONGS

Look for This Trade Mark



And Now you can measure your Wells *accurately~Economically~Easily.*

Use of the *Halliburton Measuring Device* was formerly confined to the Halliburton Cementing Process. Now it is available to all who wish economical, easy, and strictly accurate measurement of their wells.

The Halliburton Measuring Device has been thoroughly tested in the field. It gives measurement of a 5,000 foot well within two inches of absolute accuracy. It is compact, durable, simple to handle. To officials who insist on greatest possible accuracy it is an indispensable part of oil well equipment. Full details of this important development (removing as it does, another element of uncertainty from oil well drilling) together with prices, will be mailed on request.

HALLIBURTON

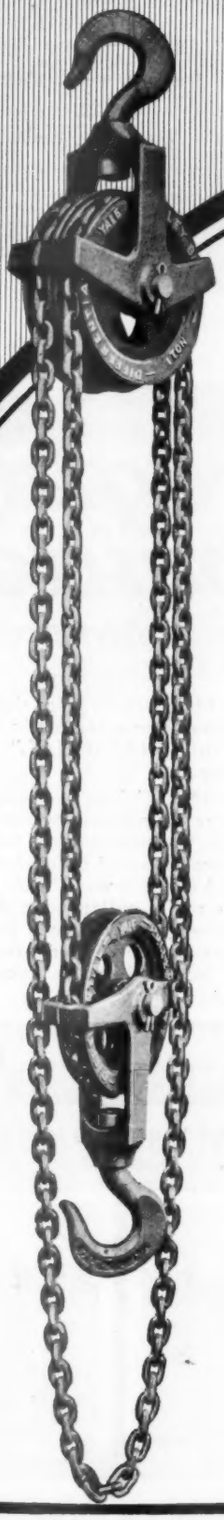
OIL WELL CEMENTING CO.

Duncan, Oklahoma

TRADE YALE MARK

Chain Blocks

Yale Differential Chain Block shown here; capacities ¼ ton up to 2 tons.



YALE leadership in the chain block field is not accidental, but the direct result of years of study of the individual needs of many thousands of Chain Block users.

Thus the name Yale does not merely appear on one kind of Chain Block but a complete *line* of Blocks—Spur-Geared, Screw-Geared and Differential—all especially adapted to some particular use for which no other will do quite as well or with as great economy of time and money.

Examine the features, for instance, that make the Yale Differential Block preferred in its own field. It is strong and compact, giving maximum service where light weight and portability are essential. Contractors, engineers and foundry workers, find it the ideal all-purpose equipment.

Like Yale Chain Blocks of every type, the Yale Differential Block is *all Yale-made.* It is constructed, part by part, in the Yale plant and the line equipped throughout with the same electric-welded steel chain and die-formed hooks furnished with Yale Spur-Geared and Screw-Geared Blocks. The user is safe-guarded because of rigorous tests made in the Yale Plant.

Look into the Yale Differential Block proposition from all angles. Compare it, both from printed description and from actual test. We shall be glad to arrange to provide you with either or both. As a preliminary, send for the Differential folder, free on request.

The Yale & Towne Mfg. Co., *Stamford, Conn., U. S. A.*
Canadian Branch at St. Catharines, Ont.

YALE MARKED IS YALE MADE

YALE Hoisting and Conveying Systems

When the raging flood subsided!
"National" Quality was again proved
Thundering, raging waters, pouring in terrific torrents from the Big Tujunda mountains—ripping trees and rocks—menacing all in their path—pounded in all their fury against this "NATIONAL" Pipe Line of a Southern California gas company.
Against these overwhelming odds, "NATIONAL" fought a magnificent battle, holding the terrific force of the thundering water, ties and powerful debris—the strength of it was the outstanding feature of the storm. Again and again as the storm rose and quieted down and the raging flood subsided, "NATIONAL" still was there. Not until a railroad trestle, 500 feet above the main, collapsed and was swept against the pipe, did its powerful strength give way. For an hour and a half it battled even these tons and tons of debris and timbers—finally breaking at the welded joint. Here is acknowledged proof of the quality of "NATIONAL" Pipe.
NATIONAL

"WILLIAMSPORT WIRE LINES

are very good"

—says W. H. Sult, driller on this Kansas Lease.

Month after month we have repeated publicly what we have said privately, for years—A good line in the hands of a good, careful driller is one of the greatest contributions to the economical success of a drilling operation.

Mr. Sult in his modest tribute to Williamsport Lines has more certainly proven his own ability by what he has accomplished with a **good line.**

We thank you, Mr. Sult, for giving our line the fair treatment it deserves.

Williamsport Wire Rope Company

Main Office and Works: Williamsport, Pa.

General Sales Offices:
122 S. Michigan Ave., Chicago, Ill.

Oil Country Sales Offices:
Williamsport Bldg., 4th and Midland Valley Tracks, Tulsa, Okla.

Distributors
Houston Mildred Shidler Blackwell Ardmore Holdenville Bristow Wichita Falls Bartlesville Smackover Arkansas City Cromwell Shreveport Casper Lewistown Electra

Use Madesco Tackle Blocks, They Stand the Gaff

Are the Gears in a Gear Unit Important?

We think so! That is why we make the gears in Nuttall, double reduction, oil well, pump gear units from our famous BP "tough-hard" steel. BP gears are four times as hard as ordinary carbon steel gears, they have triple the resistance to impact, and they have four times greater strength. To assure a smooth, vibrationless operation we grind the teeth of these gears to the true involute tooth form. Nuttall, double reduction pumping units have built into them the inherent quality, which has made the Nuttall Company the world's largest manufacturer of diversified industrial gearing. They are reliable. They will operate well in, and they will stand up under, the most strenuous oil field services.

R. D. Nuttall Co., Pittsburgh, Penna.

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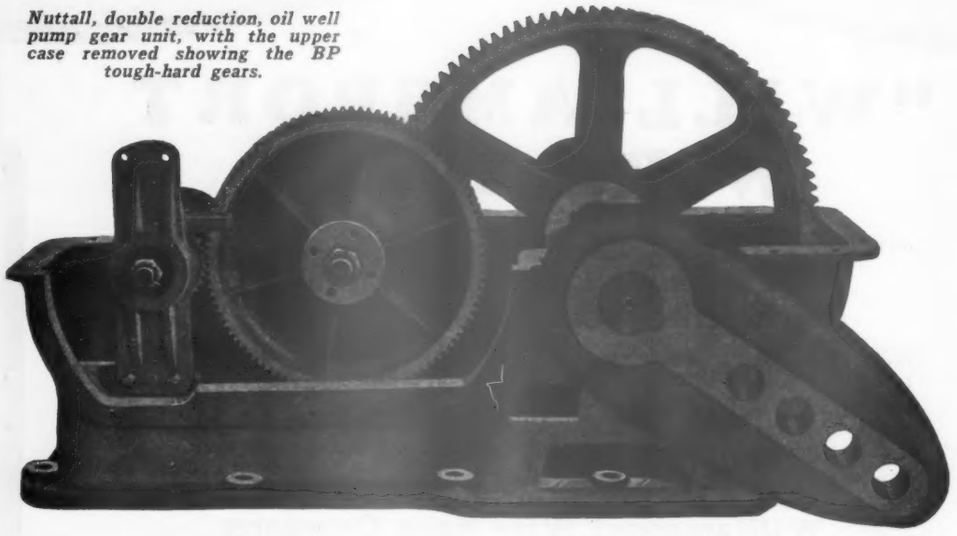
Oil Well Supply Co., Authorized Distributor

Nuttall, double reduction, oil well pump gear unit, with the upper case removed showing the BP tough-hard gears.



Nuttall

150-250 and new 400, 600, 900 and 1350 pound standards

Taylor Forged Steel Flanges meet every requirement of highest pressure super-heated steam and high pressure, high temperature oil cracking processes. Styles and standards as follows:

Low hub and high hub flanges
Boiler flanges
Tank flanges
Riveted pipe flanges (spiral pipe standards)
Seamless forged steel boiler nozzles
Forged steel welding necks

Ask for our special flange catalog.

EXTREMELY high pressures and the use of super-heated steam have produced conditions which demand the use of forged steel flanges.

Taylor forged steel flanges are unbreakable. They are forged from solid steel billets and are free from all blow holes, gas pockets, sand inclusions, shrinkage cracks and other defects.

In heavy duty oil refining and oil field service, Taylor forged steel flanges can be depended upon for safe, leak proof connections.

A large stock of Taylor flanges for pipe, tank or boiler connections is carried on hand. Orders can be filled promptly.

Taylor Forge Division
American Spiral Pipe Works

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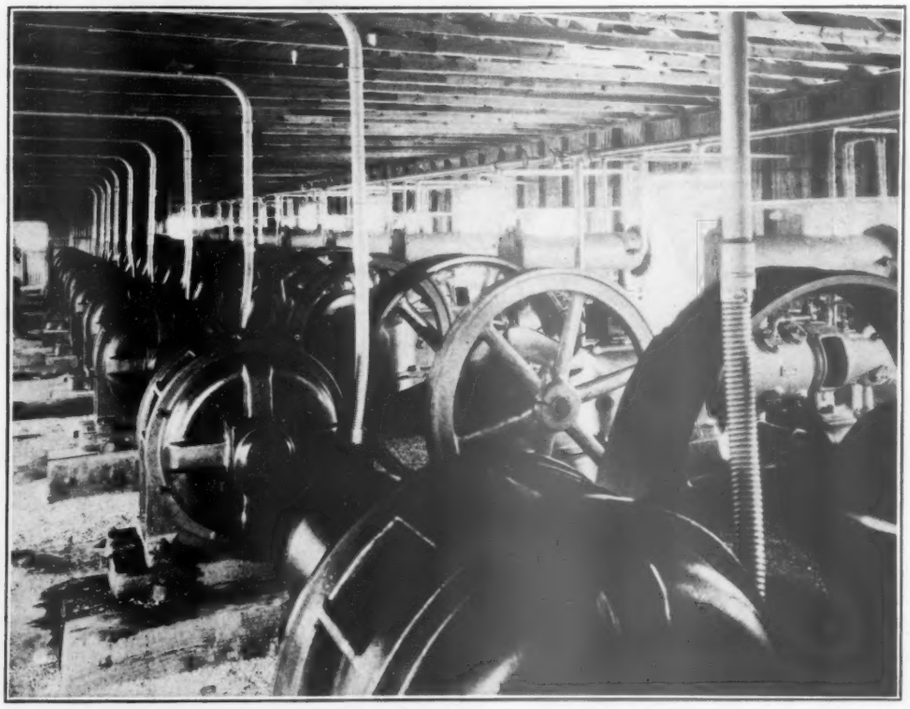
O&GJ 7-7 Gray

WHEALTON & TOWNSEND, Inc.



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26—10-4¼x10 NCTB Chicago Pneumatic High Pressure Compressors

Tidal-Osage Oil Company, Seminole, Oklahoma. Twelve 10-4¼x10 NCTB Chicago Pneumatic Two-Stage Compressors.

Service at Seminole

SEMINOLE — Oklahoma's Wonder Field. In this as well as other important fields, Whealton & Townsend, Inc., has a branch service point located on the ground to quickly serve you.

A service that is complete, with engineers prepared for consultation on any compressor problem, our organization is prepared to execute contracts on construction of compressor plants of all types and sizes.

Whealton & Townsend, Inc., facilities include practical field men and engineers familiar with every phase of compressor plant operation, enable us to design, construct and furnish all materials for compressor plants on a satisfactory and economical basis.

Our engineering staff has enjoyed a wide experience on both air and gas lift; their service for consultation will be given upon request.

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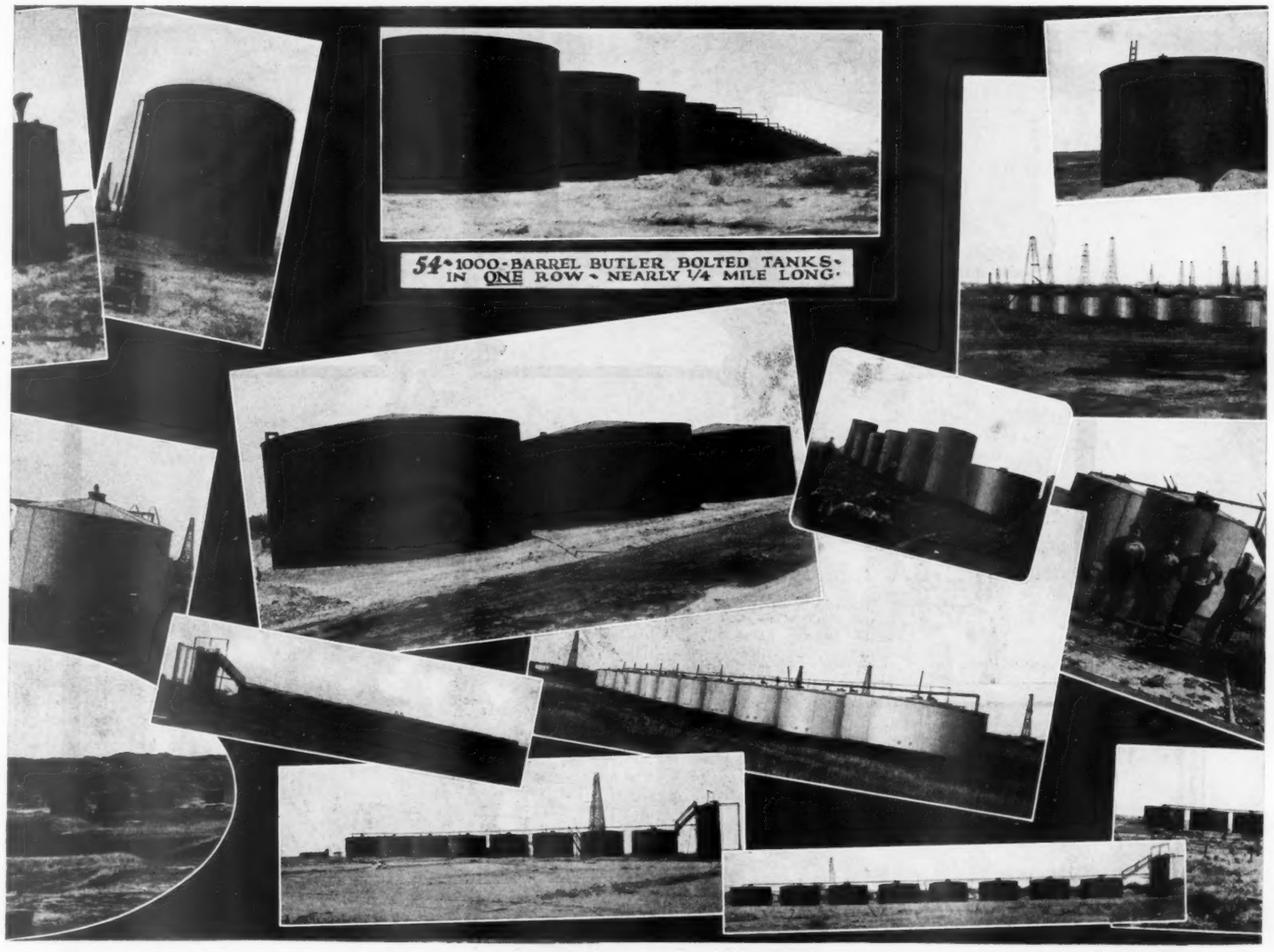

Where production shows life

These reliable dealers erect Butler Bolted Tanks and are ready to serve you speedily:

M & V Tank Company at Wichita Falls, Olney, Nocona, Cross Plains, Albany, Cisco, Isom, Pampa and Brownwood, Texas.

Drane-Humphrey Co. at San Angelo, Big Lake and McCamey, Texas, and Carlsbad, New Mexico.

Drane Tank Company at Tulsa, Holdenville, Seminole, Hallett and Shawnee, Oklahoma; Eldorado and Madison, Kansas.

M. A. Trimmer at Blackwell, Oklahoma.

Southern Steel Company at San Antonio and Mirando City, Texas.

Butler and Gamble, 300 Great Republic Life Building, Los Angeles, California.

Petroleum Specialties Co., at Casper, Wyoming.

Thomas Moran at Oil City, Shreveport and Georgetown, Louisiana.

Continental Supply Co. at Kevin, Montana.

New "Oil Field Tanks" Catalog

Just off the press. Contains information on bolted tanks, steel stairs, valves, flow and storage tanks, welded field tanks, etc. Send for a copy today.

Butler Cleanout Opening

is 2'x4'. This cleanout is not a backbreaker. Convenient for entirely cleaning out the tank. The work can be done easily, quickly and more safely.

All bolts are removable from the outside!

Up to the northern part of our country and across the boundary line down to the warm waters of the Gulf, Butler Tanks have helped make money for oil men. Some of these tanks are in Texas, some in Oklahoma and some in Kansas and Canada.

Butler Bolted Tanks serve where production is showing life.

Men who erect tanks just naturally like the Butler Bolted type. All holes in each sheet are punched by mammoth machines. The men can quickly erect the tanks because the holes are dependable as to size and position.

The number of sheets necessary for a tank are reduced because Butler sheets are large. The number of seams are reduced. Fewer seams mean fewer leaks. Fewer sheets mean less handling and speedier erection.

It will pay you to get in touch with one of the dealers listed or write us direct for complete information.

Any kind of welded tank made to your specifications

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Butler Products include: *Ready-Made* Steel Buildings, Cans, Funnels, Buckets, Measuring Pumps, Truck Tanks, Underground Tanks, Storage Tanks, Bolted Tanks, Etc.

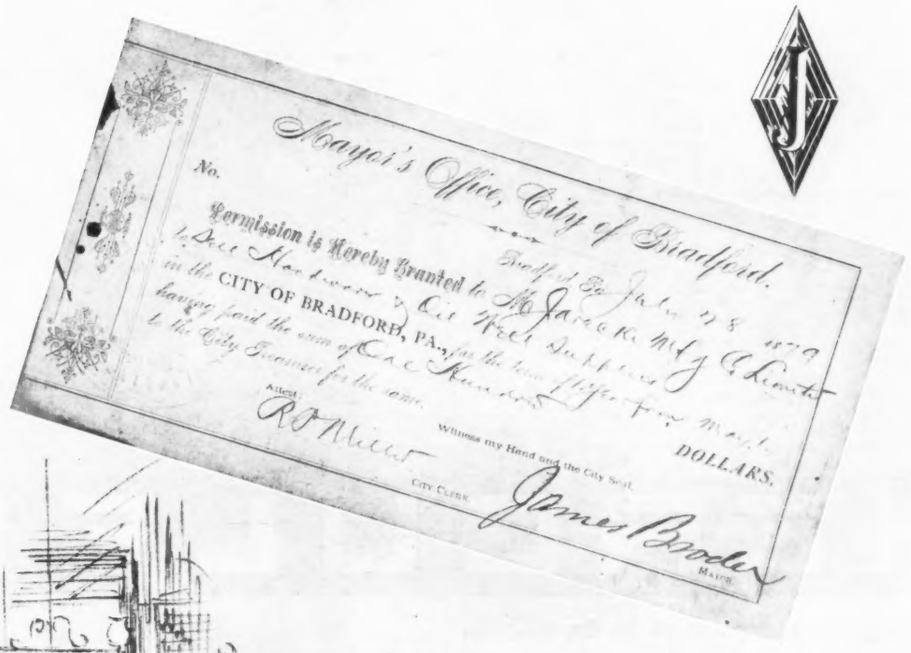
Actual Service is the Real Test for Chain

FIND the experienced drillers—those who have the reputation of "making hole"—and usually you find a Link-Belt drive chain on their drilling-rigs. A measure of extra service is in-built in SS-40 Plus and SS-124 Plus, and it is this extra toughness and ability to stand punishment that has earned for Link-Belt Oil Field Drive Chains their reputation for dependability and freedom from trouble.

LINK-BELT COMPANY, INDIANAPOLIS, INDIANA 3147

LINK-BELT

SS-40+(Plus) Sprocket Chain SS-124+(Plus)



This Authorized Us to Do Business in Bradford, Pa., in 1879

The permit shown in the above illustration was personally signed by the mayor of Bradford, Pa., forty-eight years ago. At the time of its issuance, we already had twenty-seven years of progress behind us!

This year we celebrate our seventy-fifth anniversary—our Diamond Jubilee. We invite you to drop in at our nearest store and discover why we have gone on and on while so many of our contemporaries have fallen by the wayside.

JARECKI
Malleable Fittings

Made of air-furnace malleable. That means freedom from impurities which cupola melting cannot escape—unvarying uniformity.

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Your nearest Jarecki store is waiting to serve you.

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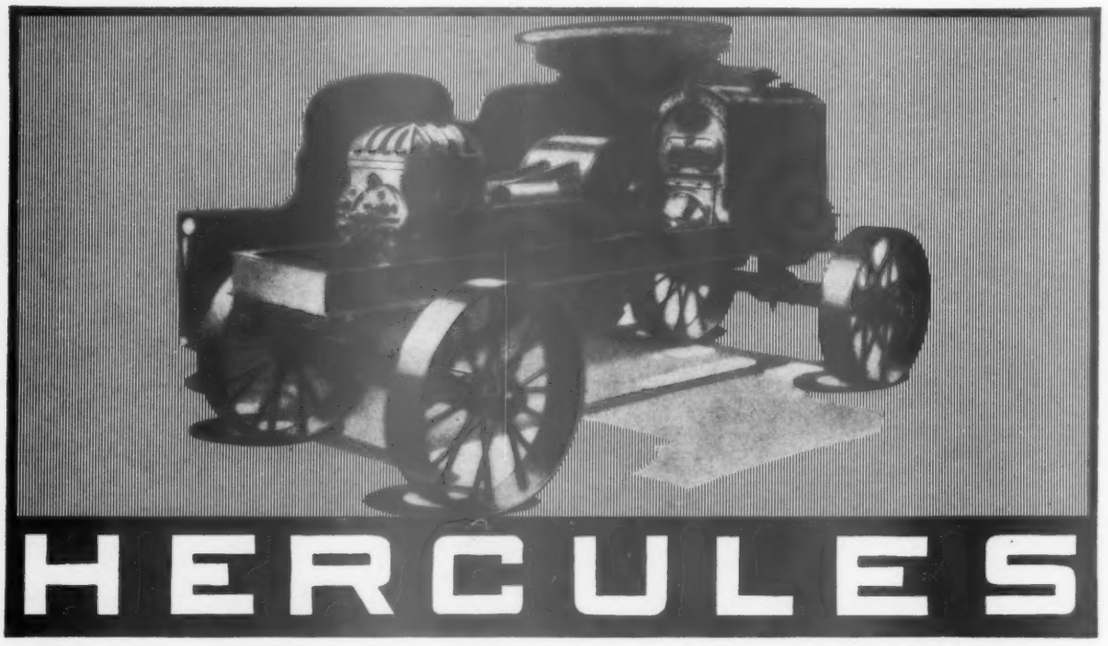
Branch stores at all important places in the Oil Country.

District Offices { Pittsburgh, Pa.; El Dorado, Kan.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.



HERCULES

Power for pumps must be dependable.

The engine cannot be capricious. It must start up when the switch is thrown in; and stop only when the switch is thrown out.

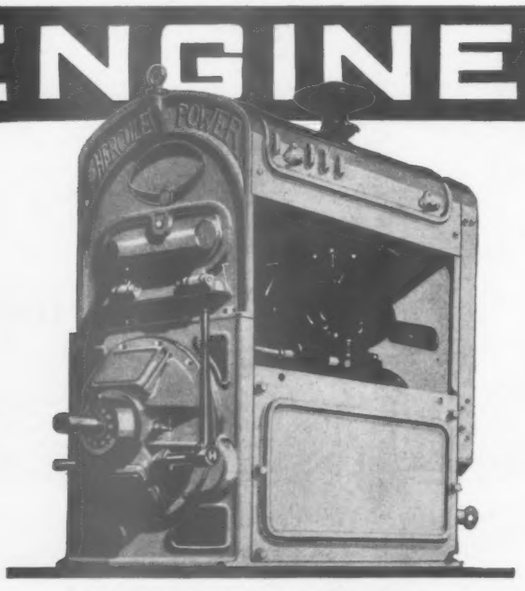
The power must be steady. And it must be supersaturated with H.P.

So, naturally, the Wheatley Bros. pumping unit, pictured above, is now Hercules-equipped.

Another tribute to the design and organization behind the Hercules Engine.

HERCULES MOTORS CORPORATION, CANTON, OHIO, U. S. A.

ENGINES



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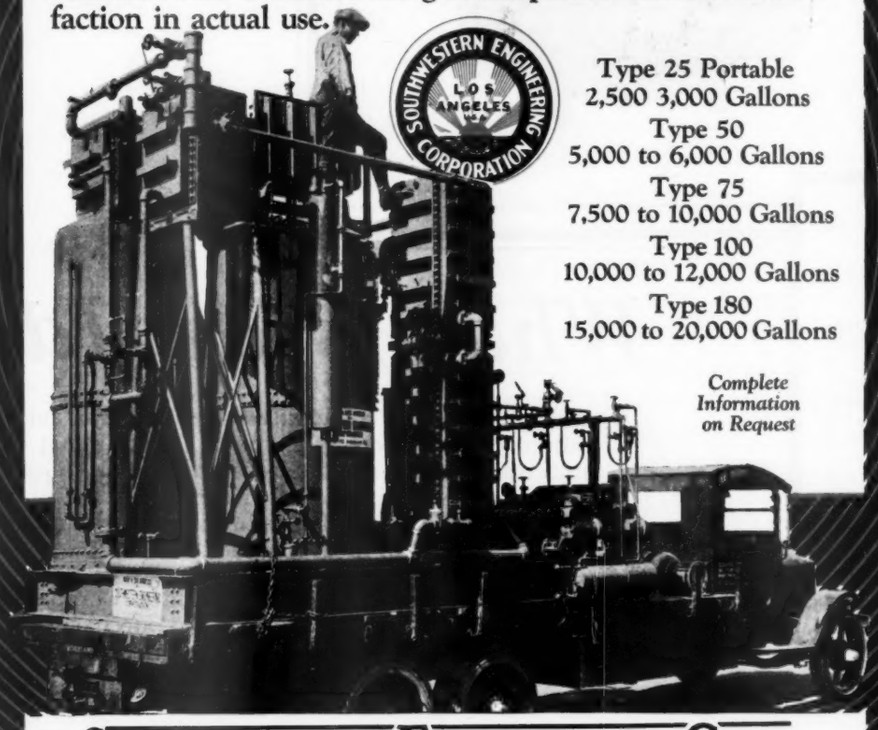
The Balanced Unit
SOUTHWESTERN
FACTORY BUILT
Absorption Plants

These plants are not assembled nor sold merely upon the performance or construction of a single piece of equipment or apparatus. They are built of well proportioned and efficient component parts to insure the utmost value in a balanced unit to render the greatest performance and satisfaction in actual use.



Type 25 Portable
2,500 3,000 Gallons
Type 50
5,000 to 6,000 Gallons
Type 75
7,500 to 10,000 Gallons
Type 100
10,000 to 12,000 Gallons
Type 180
15,000 to 20,000 Gallons

Complete Information on Request

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What is an Ideal!

Great attainments—leadership in any activity—such things do not merely happen. There must be definite ambitions toward a clearly-visioned ideal. The *Ideal* then becomes the driving force of the individual or the organization—the pledge of unrelenting effort and maintained performance. An ideal is a task-master.

The ideal of the Darling Valve & Mfg. Company is leadership in the making of valves. The purchaser of a Darling Gate Valve—whether for producing, conveying or refining—is safeguarded by the existence of this active ideal.

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MATHIESON
Industrial Chemicals

"Buying— A Neglected Science"

IN a recent article on modern purchasing, an outstanding figure in American business stated: "Until recent years, buying has been a neglected science".

This writer goes on to say: "True economy is not merely low initial cost, but a nice adjustment of those elements which secure the most efficient satisfaction of purpose, or utility, at a minimum cost".

This buying precept, if conscientiously followed, would guide analytical purchasers directly to EAGLE-THISTLE products. Mathieson Industrial Chemicals are sold, not only on the basis of known, definite quality, but also on the basis of "the most efficient satisfaction" that the customer eventually derives from them.

This latter term embraces all those factors which, for the sake of convenience, are grouped under the heading of service. Mathieson customers, through their tangible expression of faith in Mathieson service, are daily proving that in some industries at least, modern buying is the reverse of a "neglected science".

CAUSTIC SODA
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(Sole licensee on the North American continent for the Hypochlorite Process of Refining Petroleum)

Deal Direct with the Manufacturer

Your Turn May Come-NEXT!

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Your turn may come—any day—if you are pinning your faith to wooden rigs.

An accident like this could scarcely happen to an "IDECO" Galvanized Steel Derrick. "Pull ins" are practically unknown. Built of first-grade, rolled structural steel, the superior strength and soundness of "IDECO" reenforced construction has been repeatedly demonstrated against high winds, lightning, rust, corrosion, and the tremendous vibratory strain of continuous operation.

Can you afford the risk of damage—loss—failure—involved in wooden rigs? Get the facts on "IDECO" Steel Derricks and Equipment from our nearest branch.

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

The International Derrick & Equipment Company

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries

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Big Production to Continue for Months

Highest daily average estimated production in 1926, week ended Dec. 25, 2,385,139 bbls. Lowest in 1926, January 30, 1,915,960 bbls.

Completion of Wells of Gusher Proportion in Different Sections of Mid-Continent Assure Large Output

By Andrew M. Rowley

Highest daily average estimated light oil production in 1926, week ended Dec. 25, 1,797,349 bbls. Lowest in 1926, Jan. 30, 1,371,600 bbls.

Completion of big wells in different sections of the Mid-Kansas area, with extensions to existing pools and the discovery of big production in additional producing horizons assures a continuance of a big production of crude oil for the entire United States for at least several months. Drilling operations which are starting as a result of recent discoveries will require two months or more before completion but these operations are expected to add materially to production at the end of that time. In the meantime, the present big flush fields are showing no signs of abatement, the Seminole area in Oklahoma averaging 431,000 barrels daily.

Of importance to the general situation and especially to operations in Louisiana is the completion in the Pine Island district of Caddo Parish of a well in the Trinity horizon which started at 12,000 barrels daily of 42.3 gravity crude and which flowed 6,500 barrels on Tuesday of this week through a choke. The Indian Territory Illuminating Oil Company's well in Section 1-7-6, Oklahoma, 3 miles south of the Bowlegs Pool of the Seminole area, was holding up at 452 barrels an hour on Tuesday. Wells in the Yates Pool in Pecos County, Texas, show no signs of a decline, the recent big completion there still being estimated as being good for between 15,000 and 20,000 barrels daily. The Roxana Petroleum Corporation's wildcat in Logan County, Oklahoma, the deepest good producer in the Mid-Continent, was flowing 3,000 barrels daily at approximately 5,989 feet.

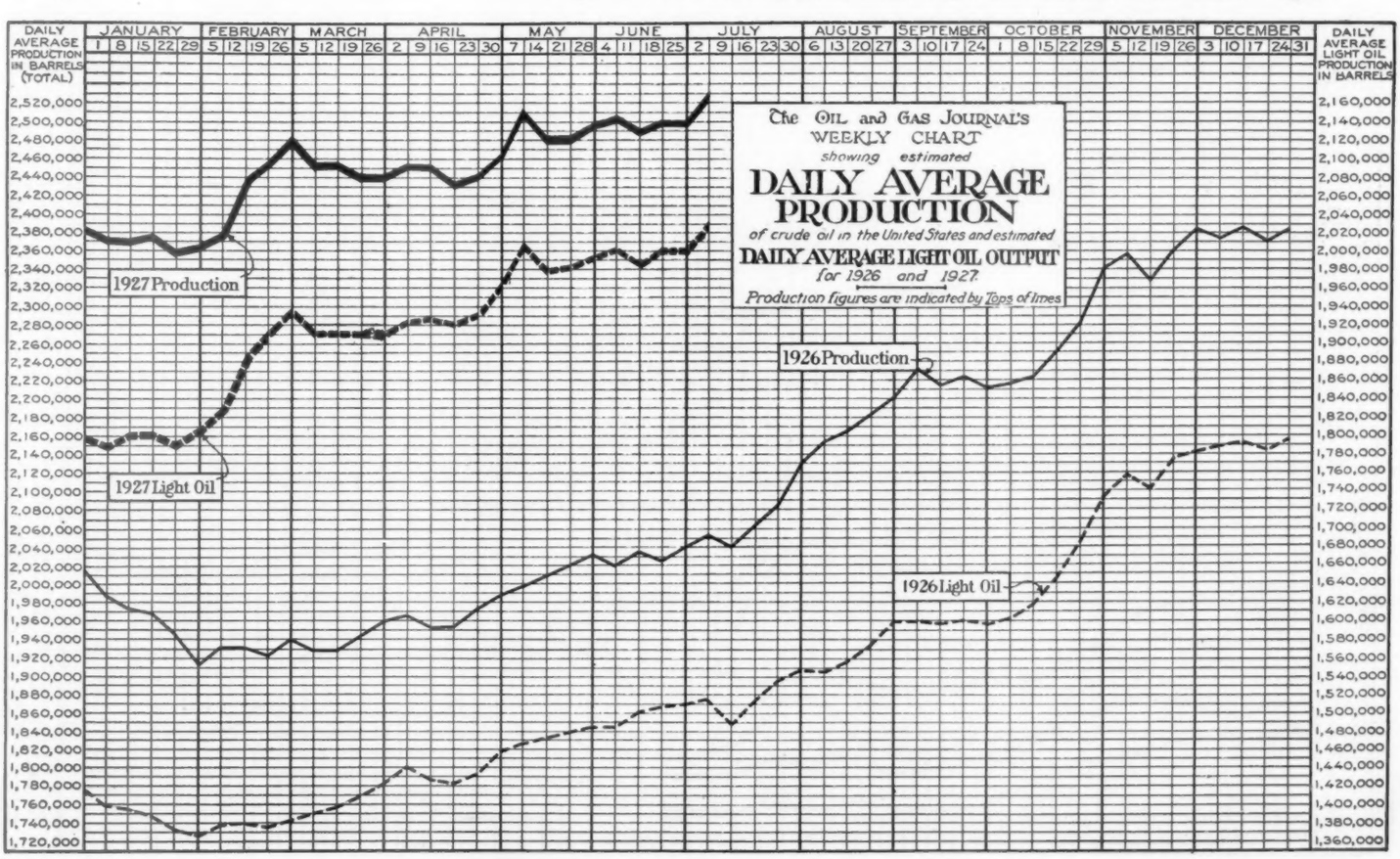
Crude oil is still being stored in Oklahoma and Kansas at a rate of approximately 150,000 barrels daily, despite a high rate of consumption and it is expected oil will be stored in these states during most of the summer. This presents a different picture than is usual at this time of the year and is a most important factor in considering the price situation.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended July 2, and a comparison with the previous week follows:

	July 2		June 25	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	21,835	.....	21,685	.....
Burbank	42,010	.....	43,135	.....
Other Osage Fields	31,170	.....	31,415	.....
Cushing and Shamrock	21,415	.....	21,495	.....
Bristow and Eastern Bristow	26,280	.....	26,360	.....
Cromwell	13,310	.....	12,245	.....
Garber	13,415	.....	13,640	.....
Blackwell-Braman	10,890	.....	11,040	.....
Seminole	422,910	.....	393,910	.....
Wewoka	18,740	.....	18,975	.....
Northern Miscellaneous	113,380	.....	113,495	.....
Southern Fields	67,115	.....	67,620	.....
Total Oklahoma	802,470	.....	775,015	.....
North Louisiana	41,375	8,835	41,025	8,865
Arkansas	23,960	88,000	24,160	88,935
North Central Texas	159,370	.....	160,845	.....
West Texas	127,658	.....	116,147	.....
Texas Panhandle	119,040	.....	120,880	.....
East Central Texas	34,362	.....	34,400	.....
Kansas	110,515	.....	111,945	.....
Total Mid-Continent Area	1,418,750	96,835	1,384,417	97,800
Gulf Coast	.....	153,205	.....	154,855
Southwest Texas	.....	33,530	.....	33,315
Eastern	111,500	.....	111,500	.....
Rocky Mountain Area	86,280	.....	86,340	.....
California—				
Santa Fe Springs	41,500	.....	41,500	.....
Long Beach	93,000	.....	93,000	.....
Torrance	6,000	17,500	6,000	17,500
Huntington Beach	74,000	.....	74,000	.....
Dominguez	16,000	.....	16,000	.....
Rosecrans	9,250	.....	9,500	.....
Inglewood	22,000	13,000	22,500	12,000
Ventura Avenue	37,500	.....	37,500	.....
Seal Beach	60,000	.....	65,000	.....
Remainder of State	55,000	186,000	55,000	186,000
Total California	414,250	216,500	420,000	215,500
Total United States	2,030,780	500,070	2,002,257	501,470
Grand Total	2,530,850		2,503,727	

Total Increase, 27,123 Bbls.; Light Oil Increase, 28,523 Bbls.



Advance Oklahoma Gasoline Prices

Most Refiners Asking 7 Cents for U. S. Motor Grade. Fuel Oils and Distillates in Demand

By C. O. Willson

Continuing a trend which was apparent the latter part of last week the Oklahoma (Group 3) refined opened on Tuesday with a generally stronger tone in gasoline and fuel oil including distillates. Despite the strength in distillates, kerosenes were inactive with prices the same as last week. Following the lead of the refinery market, natural gasolines, after a decline since the latter part of May, were firm with the product in a position to advance with any increase in orders.

The most important development of the week was the action of the refiners in advancing their gasoline prices. As explained in these columns last week several of the major refiners early in the week advanced their quotation on 58-60, U. S. Motor gasoline to 7 cents to the trade. Additional refiners joined in this movement so that the first of the week a majority of the Oklahoma refiners were quoting 7 cents to the trade on this grade.

On Tuesday it was too early to predict just how successful the 7-cent price would be. Several refiners reported a normal movement to their regular customers at the 7-cent price. Most market observers agreed that it would be necessary to wait until the latter part of this week or the first of next to determine whether there would be enough buying volume to support the higher price. Reports from Middle West points indicated a heavy gasoline consumption over the three-day holiday period ending Monday night and sellers were expecting that this retail demand would bring heavy purchases from jobbers before the end of the week.

While the 7-cent price was being quoted by most refiners there was sufficient 6¾-cent material available to constitute the low of the market spread. Before the end of June considerable U. S. Motor gasoline was sold out of Oklahoma for July shipment as low as 6½ cents. Some of this material has made its appearance for resale at prices under 7 cents. At the same time refiners outside Oklahoma, in a few cases at least, were quoting under the Group 3 price.

REFINED MARKET BAROMETER

With reports from the different parts of the United States indicating that the past week established a new record in the gasoline consumption for the year, developments in the refinery tank car market were not uniform. On the West Coast refiners absorbed all of a 1-cent general advance in tank wagon and service station prices in their domestic shipments, and in the Mid-Continent many refiners advanced their prices for July shipment. In the eastern part of the United States, however, sellers were having some difficulty in maintaining their prices despite the better demand. A factor in the eastern market is the heavy receipts of California gasoline. The influence of California also is being felt in the East Coast fuel oil market, due to the continued heavy shipments. The fuel oil and gas oil market in the Middle West and Mid-Continent was firm. There were no changes of importance in either kerosenes or distillates, with the former the most active product of the two. A dearth of orders from certain industries where there has been a slowup in manufacturing operations was the only change in the lubricant situation. Wax prices were unchanged. A firmer tone was apparent in natural gasoline east of the Rocky Mountains, and on the West Coast prices were advanced along with the refinery gasolines.

Mid-Continent—Gasoline prices higher, with greatest advance in Oklahoma and Kansas. Natural gasolines firm. Kerosenes inactive, but prices unchanged. Good movement of distillates. Lubricants and wax unchanged.

Atlantic Seaboard—Bulk gasoline reduced one-quarter cent first of week, due in part to heavy movement from California. Kerosene fairly active. Heavy movement of California fuel oils tends to weaken eastern market.

Pennsylvania—No general changes in gasoline prices. Neutrals strong. Fuel oils weak. Kerosene weak.

Chicago—Heavy gasoline consumption over week-end aids gasoline demand at refineries. Kerosene steady. Distillates unchanged. Gas oil firm.

California—Gasoline prices, including natural gasolines, advanced following higher tank wagon schedules. Kerosene prices lowered for shipment to Orient. Other products unchanged.

Government Report

The Bureau of Mines report for May released during the past week, considered strictly from the standpoint of the manufacture and consumption of refined products, was encouraging. However, the fact that approximately 300,000 bbls. daily of crude oil were added to storage during the month east of California tends to offset any undue optimism regarding the general petroleum market situation.

The complete May report will be found elsewhere in this issue. It shows for the refining industry as a unit gasoline production decreased under April despite the fact that crude oil runs to stills were greater. With a 10 per cent increase in demand, gasoline stocks during the month decreased 3,770,000 bbls., one of the largest monthly decreases in the history of the industry. This placed the gasoline stocks in practically the same situation that it was a year ago, based on days' supply.

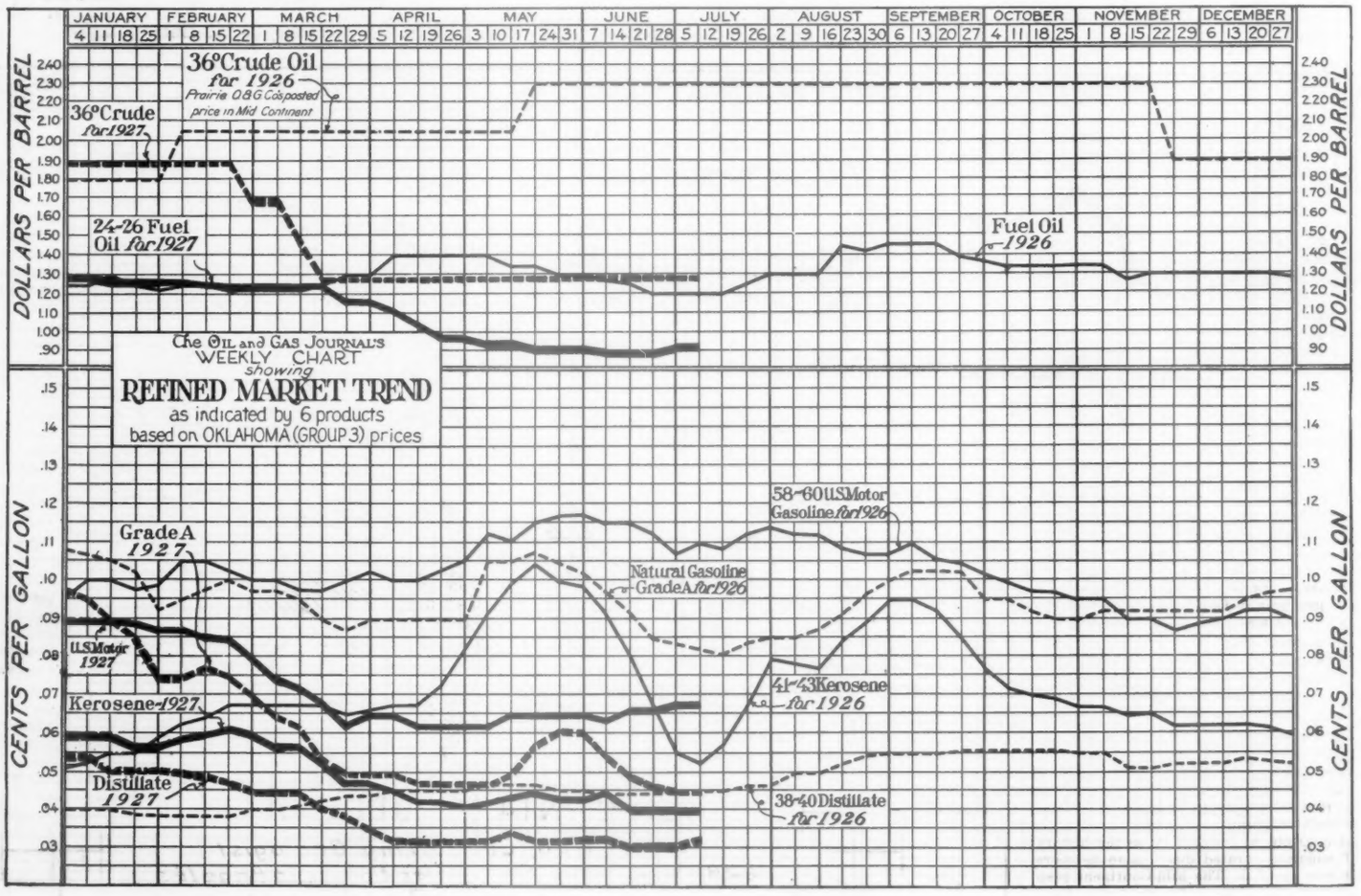
(Continued on Page 137)

***MID-CONTINENT REFINERY OPERATIONS**

(Figures given in thousands of barrels.)

	Crude runs to stills : bls.	Gasoline output	†Gasoline stocks	Kerosene output	†Kerosene stocks	Fuel & gas oil output	†Fuel & gas oil stocks
May, 1927	13,203	5,472	5,547	1,060	949	5,496	6,588
April, 1927	12,675	5,781	5,595	978	1,131	5,292	6,278
May, 1926	13,247	5,879	4,292	1,214	606	5,842	5,395

*Oklahoma, Kansas, North Central Texas, North Louisiana and Arkansas. Based on Bureau of Mines reports.
†Stocks end of month.


JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
DOLLARS PER BARREL
36° Crude Oil for 1926
Prairie O.B.G. Cos posted price in Mid Continent
36° Crude for 1927
24-26 Fuel Oil for 1927
Fuel Oil 1926
The Oil and Gas Journal's WEEKLY CHART showing
REFINED MARKET TREND
as indicated by 6 products based on OKLAHOMA (GROUP 3) prices
CENTS PER GALLON
Grade A 1927
58-60 U.S. Motor Gasoline for 1926
Natural Gasoline Grade A for 1926
U.S. Motor 1927
41-43 Kerosene for 1926
Kerosene 1927
Distillate 1927
38-40 Distillate for 1926

California Situation Much Improved

Action of Big Companies in Shutting in Production at Critical Period Shows What Remedy Can Be Applied

By J. E. Eaton
Consulting Geologist.

The peak of production in California was apparently past two months ago, or somewhat in advance of the national peak. A temporary revival at Alamitos Heights, due to deeper sand penetration, has caused the decline curve of the State to be rather irregular, but the general improvement is nevertheless very noticeable and encouraging. The apparent passing of the California peak of production was mentioned in The Oil and Gas Journal several weeks ago by L. P. Stockman, staff correspondent, and by the writer, and subsequent events have strengthened this view.

The improved conditions existing in California are due almost entirely to a shutting in of production by the larger oil companies. Approximately 30,000 bbls. of light oil was shut in at the most critical time. There can be little doubt that this action greatly relieved the situation if it did not actually prevent demoralization.

Prompt Action at Crisis

The accompanying graph has been prepared in order to illustrate the improvement effected. The top of the heavy black line shows the actual production in California, while the top of the shaded area shows the production as it would have been if no corrective measures had been taken. It will be noticed that the peak occurred in the week ended April 30 and as a result of corrective measures. This was nearly two months earlier than it would have occurred had production been allowed to mount unchecked.

There was apparently no wavering on the part of the large oil companies when the time came to act. They must have known that the psychological effect upon their securities would be adverse, and that the lessened earnings due to the general depression would be temporarily aggravated by a reduction of operations. They nevertheless took the step when the time came, and with little hesitation. We have lately heard, and truthfully, a great deal about unbridled production in the oil industry. It is refreshing to find a rift in the general cloud, and to know that in one of more parts of the nation a handful of courageous executives took quiet and decisive action for the public good, even if at a personal loss.

The writer recently commented to a veteran newspaper and oil writer upon the situation above outlined. The veteran stopped pounding his typewriter long enough to make one short remark, which is worth recording. He said: "They saw what had to be done, and did it without any band-playing." Further comment after such an apt expression seems an anticlimax.

It was several weeks after the corrective measures were taken before their importance was fully realized. The significance of the action is now, however, generally appreciated. In critical times, even a light weight taken from the national totals is a help. When a more prosperous cycle returns, the oil worker and producer in Oklahoma and Ohio, and the service station man in Michigan and Maine, should realize that it was hastened because five or six large oil companies took upon themselves the burden of stopping demoralization in California.

Seal Beach Not a Menace

Those of us in California whose information regarding the Mid-Continent situation is not gained at first hand cannot, of course, discuss intelligently the sharp ups and downs in production occurring in that region. There are nevertheless general principles which told true for all oil districts, and which cause the history of widely separated districts to be more or less parallel. The Mid-Continent man may gain something by reviewing California statistics.

There has been for some time, and there is still at present, a widespread impression that the national situation may continue to be depressed over an abnormally long period. This may happen, and yet the writer cannot, from general experience, believe it to be likely. Let us see if California has anything to teach us in this respect.

A few months ago, the Alamitos Heights town lot extension of Seal Beach caused a frenzy of excitement, with wells coming in at from 2,000 to 5,000 bbls. initial, and skyrocketing the production curve. The most extravagant predictions of a long period of California overproduction were current, with a peak for the field as high as 150,000 bbls. being predicted in some quarters. The technical men and executives took exception to the popular view. They placed the peak for Seal Beach at approximately half of the figure quoted, and expressed the opinion that the average townlot well, drilled two to the acre and in many cases located off structure, would probably not pay out. Their opinions were either ignored or ridiculed, and yet these opinions have proven to be correct.

Several weeks ago a few technical men and executives expressed an opinion, based upon hard work and hard earned statistics, that the California crisis appeared to be past. They were looked at askance by popular opinion, which saw only the weekly totals and the performance of temporary flush wells.

National Situation May Improve

All this has possibly a bearing upon the national situation. It will be generally admitted that there is one flush area in the Mid-Continent—Seminole—which is at this time causing the bulk of national overproduction. The present daily yield in this area of some 430,000 bbls. is, perhaps, more than the measure of national oversupply.

Seminole is one of the truly great oil producers of the world, and it will probably long be a substantial factor in the national totals. And yet, great as it is, it cannot be perennial. Many appear to have been dazzled by the tremendous—and temporary—peak which the area is establishing.

If national production should suddenly drop 200,000 bbls. daily, what effect would this have upon the oil industry? The history of nearly every great oil field of the world tel's us that when the head is off at Seminole, the area may decline 200,000 bbls. in a few months' time. The exact date and the rapidity of the inevitable decline are the only major factors which are unknown. The fact of the decline and its tremendous amount must be apparent to every petroleum technologist, whether he reads of the great production in a Tulsa office, or by candlelight in Burma.

Smoothed Curve Most Accurate

Weekly totals, which change rapidly and are erratic are accurate measures of the present, but are sometimes deceiving as to the future. In nearly all departments of the petroleum industry, it is the smoothed curve that gives the truer measure of the future. The executive who turns to the production graph on the first reading page of The Oil and Gas Journal gives one glance at the last week of production, and then mentally draws a smoother curve through the entire jagged line from the first of the year. The petroleum technologist who is commissioned to value a settled oil well is interested in its present yield, but if possible he refrains from expressing an opinion until he has drawn a smoothed curve through several months or years of changing production points. When forming an opinion of the oil possibilities of a tract of untested land, the reputable geologist is interested in the nearness of producing wells to the tract, but he also draws a smoothed curve through rock layers lying at various inclinations, and after doing this he may justly condemn land 300 feet from production and recommend land 3,000 feet away.

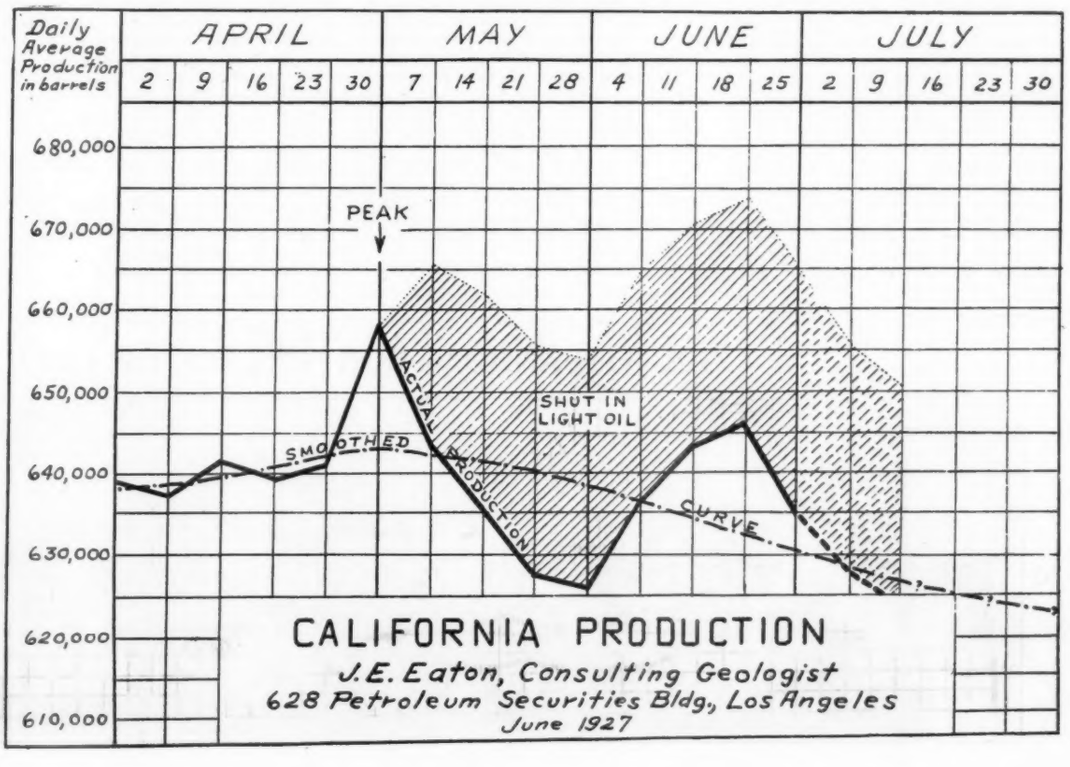
Those who take more than a superficial view of facts and happenings in the oil industry will frequently, and even usually, find themselves going contrary to popular opinion. They will see that some closely spaced wells having initial productions of 1,000 bbls. may not pay out, and that wells in other areas having initial production of only 50 bbls. will be paying propositions. They will be voicing optimism when the rank and file are pessimistic, and will be giving unheeded warnings in time of inflation and frenzied activity.

The writer cannot believe that the national oil industry is mortally wounded, or is due for years of depression. He is inclined to believe that the average onlooker has been blinded by the great—and temporary—peak of Seminole. There are men who doubtless have reasonably accurate information regarding the potentialities of the Seminole area, which, needless to say, is the present key which we are all watching. Many of these men cannot, in honor, tell what they know. Some may be free, however, and these may hazard an interpretation. If they are conscientious, but wrong, there is at least one person who will not condemn them for their attempt. The man who predicts the future production of a field, state or nation takes his reputation in his hands. Personal safety and public appreciation are not, however, necessarily the most valuable things in life.

California Outlook

The production of crude oil in California has oscillated somewhat since the apparent peak reached April 30, this being due to a deeper sand penetration at Alamitos Heights, which has considerably reduced the average financial loss in that area. A still deeper sand has been discovered on an edge of the district by the General Petroleum Corp. after persistent and careful effort, and this will be drilled to on the higher structure. This deeper sand will doubtless

(Continued on Page 88)



Million Barrels Daily from Venezuela

May Be Reached Within Five Years, Writes J. Edgar Pew. Half That in Two or Three. Not to Affect This Year

By J. Edgar Pew
Vice President, Sun Oil Co.

Christopher Columbus, on his third voyage, discovered the continent which was later called South America. This was August 1, 1498. He landed in what is now the harbor of La Vela de Coro, about 4 miles north of the present town of Coro, Venezuela. A mission colony was established at Coro, and the fathers left by Columbus erected a wooden cross, which, although 410 years old, is still in a good state of preservation. One of the purposes of this great explorer was to obtain gold for his royal sponsors and fame for himself.

He succeeded in his quest for gold, but only to a limited extent; he did open an era of discovery and colonization such as the world had never seen before, and gained for himself undying fame. Spain, his adopted country, profited greatly, and became for a time the great maritime nation of the world, and the one with the greatest colonial possession. Columbus himself died broken-hearted, and, at that time, discredited.

Had Columbus realized that the real gold of the country he had discovered was a liquid gold, and that the progress of the world centuries later would be so greatly affected by his discovery, he might at least have had a greater satisfaction in his accomplishment as solace to the bitter disappointments of his latter days.

Fourth in Production

Venezuela is today fourth of the nations of the world in the production of crude petroleum. This production for the year 1926 was over 35,000,000 bbls. The developed production at this time, March 1, 1927, is about 250,000 bbls. per day, or at the rate of over 90,000,000 bbls. per annum, although the actual production, on account of limited transportation and storage facilities, will probably not exceed 45,000,000 to 50,000,000 bbls. for the year 1927.

The developed production, plus the developed area from which additional production is certain to be had, can without any great stretch of the imagination be estimated at 500,000 bbls. per day within the next two or three years, and at even 1,000,000 bbls. per day within a period of five years thereafter.

It would seem that the realization of these greater productions will only be limited by the ability of the operating companies, influenced by the demands of the world for additional oil, to drill the necessary wells and install the transportation facilities needed to move the additional quantities of this product.

The developed oil fields of Venezuela are located in the Lake Maracaibo Basin, which lies between the forks of the northeast extension of the Andes Mountains.

Three Companies Hold Key to the Immediate Future

In the accompanying article written by Mr. Pew following a recent trip to Venezuela, Mr. Pew states that while Venezuelan production is at the rate of 90,000,000 bbls. per year, actual production in 1927 will probably not exceed 45,000,000 to 50,000,000 bbls.

A production of 500,000 bbls. per day within the next two or three years and of even 1,000,000 bbls. per day within a period of five years thereafter is not improbable.

Holdings in Venezuela owned and operated by the Caribbean Petroleum Co., in Mr. Pew's opinion, comprise the most important ever controlled by a single company.

Venezuela is not expected to affect the markets in the United States this year any more than last year, but with each succeeding year it will be an increasing factor to be seriously considered.

The Caribbean, Gulf and Lago companies hold the key to the immediate future in Venezuela.

High quality of men and skill in their work are features of American workers in Venezuela. An instance of enterprise to meet conditions is K. W. Winship's "ark" at Lagunillas, described by Mr. Pew. He also tells how the oil companies take care of their men.

The oil business is changing Venezuela. The average peon family probably existed on from 15 cents to 25 cents a day, but now a peon's services are in demand at from $1.40 to $2.00 a day.

Mr. Pew states that General Gomez, president of Venezuela, has done much to solidify his country, shows liberality to political opponents and has able administrators, including General Vincencio Perez Soto, President of the State of Zulia. Mr. Pew also praises American Consul Alexander K. Sloane, as deserving of the highest confidence of his Government.

Mr. Pew's article is one of the most comprehensive and interesting that has come out of Venezuela since the oil development got well under way.

Lake Maracaibo is located in northwestern Venezuela; it opens into the Caribbean Sea. The lake is about 100 miles in length, north and south, and at its widest point about 70 miles in width.

The basin outside the lake extends all the way around on the east, south and west sides of the lake for a width of from 15 to 30 miles, from the lake to the foothills of the mountains.

On all of these sides, and in the lake itself, oil has been found and is being produced, but the greater development and the larger part of the production is from the east side of the lake and the adjacent areas.

This oil is transported by tankers, drawing not to exceed 13 feet of water, to points outside of the lake and located on the Caribbean Sea, and is there reloaded into larger ocean tankers for shipment to the United States and England.

Producing Area

The presence of petroleum in Venezuela has long been known from the seepages of oil, which seepages can be found in many parts of the country.

In eastern Venezuela, in the State of Monagas, District of Piar, there is an asphalt lake covering about 200 acres, probably the largest body of pure asphalt in the world. There are also oil seepages found over large areas, which would indicate that greate quantities of petroleum will be found and produced in eastern Venezuela.

In the Maracaibo Basin, in western Venezuela, are found seepages of asphalt, or of oil from which the lighter products soon evaporate, leaving a heavy coating of semisolid asphalt, covering the ground sometimes to a depth of 12 inches or more. These are very prominent in the vicinity of Mene Grande, which takes its names from these seepages.

Because of the greater accessibility, the search for oil in western Venezuela has been carried on more vigorously than in any other portion of the country; and as a result, the present crude oil production is wholly confined to the Maracaibo Basin.

The presence of oil seepages, and the known structural conditions of a very large portion of the entire country, give promise of a further development and a probable future production that may within a few years make Venezuela at least second among the world's oil producing nations.

First Petroleum Grant

The first petroleum contract of Venezuela was applied for by an American interest and was granted in April, 1863. No exploitation was ever carried out under this contract, and 45 years elapsed before the Dutch Shell interests executed their first contracts for exploitation in Venezuela.

These contracts were for the exploration and exploitation for petroleum in the Districts of Maracaibo and Bolivar. They were given in the name of Antonio Aranguren and were dated February 28, 1907.

These are now held under the name of the Venezuelan Oil Concessions, Ltd. (V. O. C.), a subsidiary of the Dutch-Shell company, and are being operated by the Caribbean Petroleum Co., also now a subsidiary of the Dutch Shell company.

The Caribbean Petroleum Co., formerly controlled by the Barber Asphalt Co., entered Venezuela in 1912, having purchased the petroleum contracts of Dr. Rafael Max Valladares, January 2, 1912, and to this company belongs the credit of drilling the first well in Venezuela, known as Zumaqua No. 1, located in the now famous Mene Grande Field.

The Caribbean Petroleum Co. completed the first producing oil well in this field, and the first well in Venezuela on July 31, 1914.

Mene Grande is located in the District of Sucre, State of Zulia, and about 10 miles east of Lake Maracaibo and 75 miles southeast from the City of Maracaibo.

The Caribbean Petroleum Co., now owned by the Dutch-Shell interests, operates the properties of the V. O. C. at Mene Grande, at La Paz, and at La Con-

(Continued on Page 132)

EIGHTH ANNUAL CONFERENCE OF OFFICIALS AND HEADS OF DE

Operators in Seminole Playing Fair

Umpire Collins Gives a Picture of What Would Have Been Had There Been No Shut-Down Arrangement

By James McIntyre

The steady increase in the production of the Seminole area in Oklahoma has prompted criticism on the part of some financial and lay newspapers, which have given out the impression that the agreement among operators to curtail drilling operations in that area has been ineffective.

As a matter of fact had it not been for the agreement, which has been adhered to to the letter, the production of Seminole would have been greater than it is and it would have continued to be abnormal for a greater length of time, according to Ray M. Collins, president of the Echo Oil Co., who was chosen umpire.

Mr. Collins says that Seminole producers, both corporate and individual, have been playing the game fairly ever since the agreement was reached to adopt the Collins plan of operating and that if they continue to stand fast to the end it will save the production structure from utter demoralization.

There was no agreement to limit production in the definitely known pools. The field had gone too far for that. It would conflict with too many contract obligations; the pioneers would have been robbed of their exploration privilege which was theirs by the unwritten law of the industry. To prohibit drilling in the old fields would have caused loss to owners of nonproducing leases by the drainage of their properties, the pay sand in Seminole being soft and porous and easily drained of flush production. So work was permitted to go on uninterruptedly in the pools while the attention of Umpire Collins and the operators was centered on bringing in no new large pools.

Situation in 1-7-6

The situation on the property of the Indian Territory Illuminating Oil Co. in Section 1-7-6 was that the lease was about to expire, and the company must complete a well on it without delay or lose the lease. Umpire Collins obtained some delay while he got the owners of near-by properties to agree to a plan of future operation. He succeeded in limiting the new wells to nine and the Indian Territory Illuminating Oil Co. was then told to go on and complete its lease obligations by the completion of its well. It proved to be the largest producer in the entire Seminole district of 576,000 acres. It flowed 13,800 bbls. in the 24 hours ending Sunday, July 3, at 7 a. m.

A map of 1-7-6 near-by area will be found with this article. On it Umpire Collins has indicated what would have happened had there been no Seminole agreement, and the well completed on June 3. He has marked the locations that would have been made, basing his estimate on what occurred directly after the first well came in in the Bowlegs area in Township 8-6. According to Mr. Collins, 97 wells would have been drilling, and by October 1, he figures, 40 wells would have been completed with a probable production of 92,000 bbls. a day if the area measures up to the standards of the Seminole, Earlsboro and Bowlegs Pools. The 92,000-bbl. estimate is made by giving the 40 hypothetical wells an average production of 2,300 bbls. which appears to be a conservative estimate. As a matter of fact, only nine wells will be started and these are indicated on the map by an outer ring. When the first of these nine wells is completed, drilling restrictions will be declared off, but all the wells drilled will be limited to an average of 100 bbls. a day production. This production restriction will include the I. T. I. discovery well which will be pinched down to 100 bbls. a day when the first of the nine wells comes in a producer.

It was for the purpose of protecting all parties that Umpire Collins has petitioned the Corporation Commission for an approval of the agreement and for its support in making the agreement stick. He points out that all the lease owners who have consented to wait until the first crop of wells are in are entitled to full protection from any attempted break of the agreement on the part of owners of the permitted wells.

Umpire Collins hopes to be able to keep the production of the new pool in the northeastern corner of Township 7-6 and southeastern 8-6 down to the minimum. The pool, which has been named the Little River Pool by men in the field, is generally regarded as another Bowlegs in production. None of the other pools started with such a large producer as the Indian Territory Illuminating Oil Co.'s discovery well. There is no special reason for the belief that the discovery well will be the largest in the pool. There may be others that will far exceed it in production. It is this chance which makes the Little River Pool loom so dangerously and which makes the necessity of keeping it down until the other pools are well over their flush period of production.

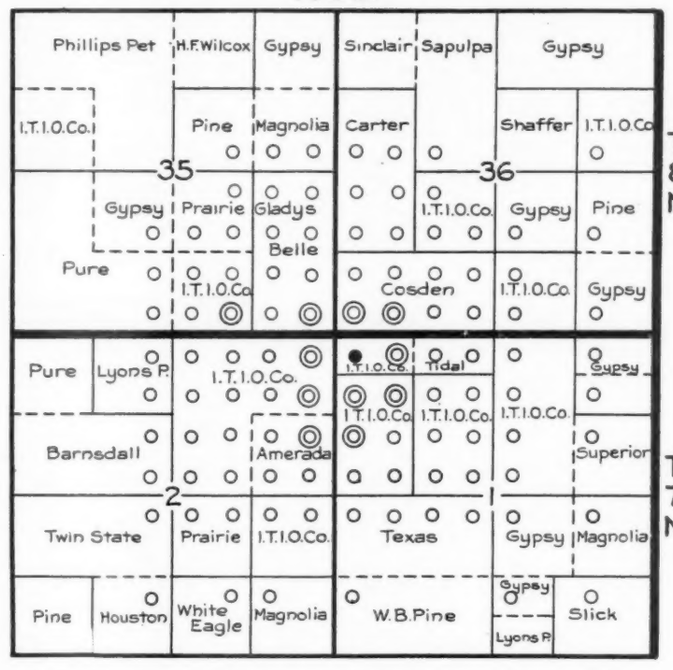
1,500-Bbl. Well Shut In

Umpire Collins calls attention to the fact that the Gypsy Oil Co. has a 1,500-bbl. well shut in in SW cor. SE Section 33-8-6. Only one well is drilling near it, two other permitted locations having been voluntarily shut down. Had there been no agreement the Gypsy Oil Co.'s well would have been producing, and 30 other wells drilling nearby.

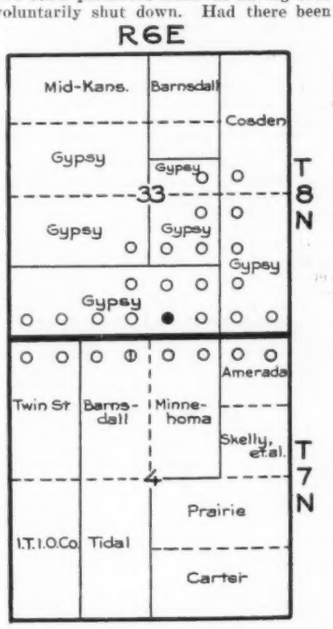
The Barnsdall Oil Co. has a promising well in C SE NW SE Section 22-7-6, southwest of the big gusher of the Indian Territory Illuminating Oil Co. in Section 1. This well was voluntarily shut down at 4,112 feet on top of the Viola lime. It has shown enough to have caused the drilling of 16 and to have started a number of wildcat tests between it and the big well in Section 1. As it is, nothing else has been started.

Prairie Oil & Gas Co.'s test in SW cor.

(Continued on Page 136)



The Indian Territory Illuminating Oil Co.'s 13,800-bbl. well is shown in NW cor. Section 1-7-6. The double-circle locations show where permitted wells will be drilled. The single-circle locations give Umpire Collins' picture of what would have been if there had been no curtailment agreement in Seminole.



The Gypsy Oil Co. has a 1,200-bbl. shut-in. Had it been allowed to produce the 27 locations marked would have been marked by drilling operations.

RTMENTS OF THE CARTER OIL CO. HELD IN TULSA RECENTLY

Bureau of Mines Statistics for Month of May 1927

By G. R. Hopkins

Crude Petroleum: All records for the production of crude petroleum were broken in May, 1927, when 76,264,000 bbls. were transported from producing properties in the United States. This represents a daily average of 2,460,000 bbls., an increase since the previous month of 40,400 bbls. and over May, 1926, or 442,200 bbls., or 22 per cent.

The Seminole Field continued to occupy the spotlight and was directly responsible for the establishing of a new high record for both the State of Oklahoma and for the country as a whole. The daily average production in the Seminole district in May, 1927, was 339,000 bbls., a gain over April of 25,000 bbls. Texas, exclusive of the Gulf Coast, showed a material gain in production in May, but the majority of the other districts, particularly California, registered decreases.

Stocks of crude petroleum east of California on May 31 amounted to 307,016,000 bbls., an increase over the previous month of a little over 9,000,000 bbls. A slight decrease was recorded in stocks of crude petroleum at refineries and in California.

Refined Products: Runs to stills of both foreign and domestic crude petroleum in May, 1927, amounted to 70,148,000 bbls., a daily average of 2,263,000 bbls. and an increase over the previous month of 31,000 bbls.

Gasoline production again showed a decrease despite the increase in runs to stills. The total output was 26,787,000 bbls., a daily average of 864,000 bbls., and a decrease from the previous month of 22,000 bbls. Indicated domestic demand for gasoline, however, showed a decided increase, the daily average of 857,000 bbls. being an increase over April of 10 per cent and amounting to nearly the production.

Stocks of gasoline at the end of the month amounted to 48,609,000 bbls., a decrease of approximately 3,750,000 bbls. from April. This material decline in gasoline stocks, which resulted from increased domestic demand and exports, was probably the brightest feature of the month from the standpoint of the industry. The gasoline stocks as of May 31 represented 49 days' supply as compared with 58 days' supply on hand the previous month and 46 days' supply on hand May 31, 1926.

Comparatively little change was recorded on kerosene and lubricants. Stocks of gas oil and fuel oil continued to increase but wax stocks were reduced for the first time since last September.

The refinery figures of this report were compiled from schedules of 327 refiners, with an aggregate daily crude oil capacity of 2,877,900 bbls. These refineries operated during May at 78 per cent of their recorded capacity as compared with 329 refineries operating at 77 per cent of their recorded capacity in April, 1927.

Statistics of Important Fields, May, 1927

Gains in production were recorded in both the Seal Beach and Panhandle Fields as well as in the Seminole district. Seal Beach and Seminole have apparently not yet reached their peak. The increase in production in the Panhandle district was probably due to improved transportation facilities.

Tank farm stocks at Seminole increased approximately 200,000 bbls. in May, a small increase in view of the large production.

The record of wells in May for these three fields showed about the same number of completions in Seminole and the Panhandle as in April but considerably more completed wells in Seal Beach. There were 462 wells drilling on May 31 at Seminole as compared with 416 the previous month.

PRODUCTION AND GRAVITY
(Barrels of 42 U. S. gallons.)

	April, 1927 Total	April, 1927 Daily Av.	May, 1927 Total	May, 1927 Daily Av.	May, 1926 Total	May, 1926 Daily Av.	Average Gravity
Seminole	*9,412,000	*314,000	10,499,000	339,000	†	†	41.0
Panhandle	3,660,000	122,000	4,185,000	135,000	713,000	23,000	36.0
Seal Beach	1,113,000	37,000	1,550,000	50,000	†	†	24.0

*Revised. †Undiscovered or undeveloped.

STOCKS AT SEMINOLE
(Barrels of 42 U. S. gallons.)

	April 30,1927	May 31, 1927	May 31,1926
Producers' stocks	306,000	335,000	.....
Tank farm stocks	*5,207,000	5,386,000	.....
Total stocks	*5,513,000	5,721,000	.....

*Revised.

RECORD OF WELLS, MAY, 1927
(Barrels of 42 U. S. gallons.)

	Completions Oil	Gas	Dry	Total initial production	Av. initial production	Drilling May 31
Seminole	72	3	13	143,000	2,000	462
Panhandle	82	4	4	33,000	400	194
Seal Beach	28	...	...	37,000	1,300	104

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS
(Including wax, coke and asphalt in thousands of barrels of 42 U. S. gallons.)

	January, 1927	February, 1927	March, 1927	April, 1927	May, 1927	May, 1926
SUPPLY:						
Production—						
Domestic crude petroleum:						
Light	61,324	58,850	65,435	63,227	66,890	51,422
Heavy	10,151	9,024	9,869	9,363	9,374	11,134
Total crude	71,475	67,874	75,304	72,590	76,264	62,556
Natural-gas gasoline	3,145	2,933	3,271	3,171	3,219	2,626
Benzol	217	200	226	217	221	176
Total	74,837	71,007	78,801	75,978	79,704	65,358
Daily average	2,414	2,536	2,542	2,533	2,571	2,108
Excess of daily average domestic production over domestic demand	428	485	432	465	457	86
Imports:						
Crude	4,514	4,181	4,434	4,063	4,557	4,502
Refined	1,269	1,508	1,175	1,201	1,329	2,017
Total supply all oils	80,620	76,696	84,410	81,242	85,590	71,877
Daily average	2,601	2,739	2,723	2,708	2,761	2,319
Change in stocks all oils	7,796	8,414	8,365	8,112	6,791	†2,450
DEMAND:						
Total demand	72,824	68,282	76,045	73,130	78,799	74,327
Daily average	2,349	2,439	2,453	2,438	2,542	2,398
Exports:‡						
Crude	1,204	1,165	1,199	1,171	1,390	1,842
Refined	10,062	9,686	9,450	9,917	11,863	9,817
Domestic demand	61,558	57,431	65,396	62,042	65,546	62,668
Daily average	1,986	2,051	2,110	2,068	2,114	2,022
STOCKS (end of month):						
Crude:						
East of California§						
Light	230,872	237,968	244,785	251,673	259,469	224,919
Heavy	48,100	47,490	45,325	46,222	47,547	59,438
California:						
Light	31,017	29,770	29,568	29,460	27,143	37,192
Heavyx	87,971	87,640	87,886	88,383	90,289	88,184
Total crude	397,960	402,868	407,564	415,738	424,448	409,733
Natural-gas gasoline at plants	560	619	697	757	926	588
Total refined	129,184	132,631	136,222	136,100	134,012	121,798
Grand total stocks all oils	527,704	536,118	544,483	552,595	559,386	532,119
Bunker oil (included above in domestic demand	3,940	3,579	3,874	4,204	4,250	3,729

*Revised. †Decrease. ‡Includes shipments to noncontiguous territories. §Exclusive of producers' stocks. xIncludes fuel oil.

PRODUCTION OF CRUDE PETROLEUM, BY FIELDS AND STATES, WITH CLASSIFICATION BY GRAVITY
(Barrels of 42 U. S. gallons.)

Field—	April, 1927* Total	April, 1927* Daily Av.	May, 1927 Total	May, 1927 Daily Av.	Jan.-May, 1927	Jan.-May, 1926
Appalachian	2,532,000	84,400	2,598,000	83,800	12,435,000	11,416,000
Lima-Indiana	156,000	5,200	161,000	5,200	783,000	843,000
Michigan	40,000	1,300	39,000	1,300	175,000	14,000
Ill.-S. W. Ind.	588,000	19,600	659,000	21,300	3,255,000	3,463,000
Mid-Continent	42,945,000	1,431,500	46,318,000	1,494,100	215,152,000	160,760,000
Gulf Coast	4,116,000	137,200	4,263,000	137,500	21,671,000	13,361,000
Rocky Mountain	2,719,000	90,700	2,720,000	87,700	13,032,000	15,782,000
California	19,494,000	649,800	19,506,000	629,200	97,004,000	91,819,000
Total U. S.	72,590,000	2,419,700	76,264,000	2,460,100	363,507,000	297,457,000
State—						
Arkansas	3,299,000	110,000	3,532,000	113,900	18,293,000	26,352,000
California	19,494,000	649,800	19,506,000	629,200	97,004,000	91,819,000
Colorado	239,000	10,000	243,000	7,800	1,239,000	358,000
Illinois	535,000	17,800	600,000	19,400	2,975,000	3,196,000
Indiana	65,000	2,200	71,000	2,300	337,000	321,000
Southwestern	53,000	1,800	59,000	1,900	280,000	267,000
Northeastern	12,000	400	12,000	400	57,000	54,000
Kansas	3,478,000	115,900	3,563,000	114,900	17,592,000	16,285,000
Kentucky	541,000	18,000	556,000	17,900	2,657,000	2,555,200
Louisiana	1,688,000	56,300	1,652,000	53,300	8,838,000	9,018,000
Gulf Coast	239,000	8,000	230,000	7,400	1,319,000	1,582,000
Rest of state	1,449,000	48,300	1,422,000	45,900	7,519,000	7,436,000
Michigan	40,000	1,300	39,000	1,300	175,000	14,000
Montana	410,000	13,700	454,000	14,700	2,129,000	3,095,000
New Mexico	146,000	4,900	100,000	3,200	654,000	607,000
New York	184,000	6,100	191,000	6,200	908,000	767,000
Ohio	641,000	21,400	670,000	21,600	3,168,000	2,973,000
Cent. and Eastern	497,000	16,600	521,000	16,800	2,442,000	2,184,000
Northwestern	144,000	4,800	149,000	4,800	726,000	789,000
Oklahoma	21,236,000	707,900	23,462,000	756,800	105,681,000	70,503,000
Osage County	2,020,000	67,300	2,095,000	67,600	10,579,000	9,967,000
Res. of state	19,216,000	640,600	21,367,000	689,200	95,002,000	60,536,000
Pennsylvania	804,000	26,800	813,000	26,200	3,915,000	3,509,000
Tennessee	4,000	100	5,000	200	21,000	18,800
Texas	17,360,000	578,600	18,372,000	592,700	86,519,000	51,963,000
Gulf Coast	3,877,000	129,200	4,033,000	130,100	20,352,000	11,779,000
Rest of state	13,483,000	449,400	14,339,000	462,600	66,167,000	40,184,000
West Virginia	502,000	16,800	512,000	16,500	2,492,000	2,381,000
Wyoming	1,864,000	62,100	1,923,000	62,000	9,010,000	11,122,000
Salt Creek	1,294,000	43,100	1,340,000	43,200	6,323,000	8,106,000
Rest of state	570,000	19,000	583,000	18,800	2,687,000	3,016,000
Classification by gravity (approx.):						
Light crude	63,227,000	2,107,600	66,890,000	2,157,700	315,726,000	243,909,000
Heavy crude	9,363,000	312,100	9,374,000	302,400	47,781,000	53,548,000

*Revised.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES

AT REFINERIES (and in coastwise transit thereto). Reported by location of storage:		April 30, 1927*	May 31, 1927	May 31, 1926
East Coast:				
Domestic		7,464,000	7,754,000	7,267,000
Foreign		2,742,000	3,043,000	2,919,000
Appalachian		1,648,000	1,662,000	1,653,000
Indiana, Illinois, etc.		2,545,000	2,465,000	1,749,000
Oklahoma, Kansas, etc.		3,922,000	4,301,000	3,825,000
Texas:				
Inland		1,173,000	1,196,000	1,227,000
Gulf Coast:				
Domestic		8,220,000	8,307,000	6,501,000
Foreign		323,000	304,000	244,000
Arkansas and Inland Louisiana		408,000	420,000	762,000
Louisiana Gulf Coast:				
Domestic		6,788,000	4,793,000	6,291,000
Foreign		832,000	1,072,000	1,807,000
Rocky Mountain		1,380,000	1,181,000	1,562,000
Total east of California		37,485,000	36,498,000	35,807,000
ELSEWHERE THAN AT REFINERIES:				
Domestic—Reported by field of origin:				
Appalachian:				
N. Y., Pa., W. Va., Eastern and Central Ohio:	Gross	6,880,000	6,975,000	7,129,000
	Net	6,597,000	6,692,000	6,824,000
Kentucky:	Gross	1,338,000	1,413,000	1,890,000
	Net	1,212,000	1,288,000	1,779,000
Lima-Indiana:	Gross	942,000	983,000	1,053,000
	Net	731,000	771,000	851,000
Illinois-S. W. Indiana:	Gross	12,247,000	12,214,000	12,518,000
	Net	11,762,000	11,729,000	12,039,000
Mid-Continent:				
Oklahoma; Kansas; Central, North, West Texas:	Gross	179,216,000	188,934,000	150,725,000
	Net	167,175,000	176,827,000	138,114,000
Northern Louisiana and Arkansas:	Gross	31,053,000	30,418,000	43,945,000
	Net	27,558,000	27,752,000	41,725,000
Gulf Coast:	Gross	18,323,000	18,450,000	16,710,000
	Net	17,955,000	18,073,000	16,333,000
Rocky Mountain:	Gross	27,027,000	27,152,000	30,567,000
	Net	26,972,000	27,100,000	30,511,000
Total pipe line and tank farm stocks east of California:	Gross	277,026,000	286,539,000	264,527,000
	Net	259,962,000	270,232,000	248,176,000
Foreign crude petroleum on Atlantic Coast		109,000	80,000	42,000
Foreign crude petroleum on Gulf Coast		339,000	206,000	332,000
		448,000	286,000	374,000
Total refinery, pipe line and tank farm stocks of dom. and for. crude petroleum east of California		297,895,000	307,016,000	284,357,000
Classification by gravity (approx.):				
East of California:				
Light crude (24 degrees and above)		251,673,000	259,469,000	224,919,000
Heavy crude (below 24 degrees)		46,222,000	47,547,000	59,438,000
California: Light		29,460,000	27,143,000	37,192,000
Heavy (including fuel)		88,383,000	90,289,000	88,184,000

*Revised.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (BARRELS)

Domestic petroleum by fields of origin:	April, 1927* Total	April, 1927* Daily Av.	May, 1927 Total	May, 1927 Daily Av.	Jan.-May, 1927	Jan.-May, 1926
Appalachian	2,298,000	76,600	2,427,000	78,300	12,246,000	11,305,000
Lima-Indiana	120,000	4,000	121,000	3,900	678,000	963,000
Michigan	40,000	1,300	39,000	1,300	175,000	14,000
Ill. & S. W. Ind.	636,000	21,200	692,000	22,300	3,296,000	2,006,000
Mid-Continent	35,667,000	1,188,900	36,472,000	1,176,500	184,266,000	176,862,000
Gulf Coast	4,057,000	135,300	4,145,000	133,700	23,629,000	16,291,000
Rocky Mountain	2,582,000	86,000	2,592,000	83,600	13,974,000	14,266,000
Deliveries and exports	45,400,000	1,513,300	46,488,000	1,499,600	238,264,000	221,707,000
Deliveries	44,782,000	1,492,800	45,417,000	1,465,100	234,372,000	217,531,000
Foreign petroleum	4,027,000	134,200	4,719,000	152,200	22,073,000	26,087,000
Deliveries of domestic and foreign pet.	48,809,000	1,627,000	50,136,000	1,617,300	256,444,000	243,618,000

*Revised.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN THE UNITED STATES*
(Barrels)

	April, 1927	May, 1927	Jan.-May, 1927	Jan.-May, 1926
Crude oil	462,000	1,341,000	3,595,000	6,084,000
Refined products	1,977,000	1,640,000	10,251,000	8,791,000
Gasoline	872,000	999,000	4,327,000	3,353,000
Tops	.....	.....	.....	71,000
Gas oil	450,000	152,000	1,710,000	2,234,000
Fuel oil	654,000	488,000	4,139,000	2,925,000
Lubricants	1,000	1,000	75,000	208,000

*Compiled by the San Francisco office of the Bureau of Mines.

(Continued on Page 134)

Need Survey of Distribution Costs

Thorough Discussion Before Federal Oil Conservation Board Being Suggested as Step Toward Co-operation

By L. M. Fanning

New York Bureau. The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

That the problem of marketing costs represents one of the most important for study and investigation by the petroleum industry has been frequently pointed out by The Oil and Gas Journal. The multiplication of filling stations and curb pumps in the past few years and the continued excessive competition in this department of the industry's activity are giving concern from the economic standpoint. There is no doubt that in the extension of the co-operative idea, the marketing field gives excellent opportunity, and in the interest of the industry and the consumer a thorough survey should be made as a basis for possible co-operation in the future.

The Federal Oil Conservation Board in its preliminary report stressed the desirability of co-operation within the industry all along the line. Co-operation in distribution it deems particularly desirable with less duplication of marketing facilities. The board's investigation determined that distribution at times involves an expense equal to the cost of production and refining.

Under present conditions of crude oil overproduction the ratio of distribution cost to other costs in retailing gasoline is strikingly out of line.. It costs more to distribute gasoline in bulk and tank wagon than does the crude oil from which the gasoline is derived. In ordinary circumstances and distribution costs are considerably higher than the cost of refining, including cracking.

Is 22 Per Cent of Price

Figures made available to The Oil and Gas Journal show that in the cost of bulk station and tank wagon distribution amounts to about 4 cents a gallon. With gasoline retailing on an average in 50 United States cities at 18.10 cents a gallon, this amounts to 22 per cent of the total retail price, including gasoline taxes and inspection fees.

The cost of crude represented in the retail price of gasoline, as pointed out in a previous article in The Oil and Gas Journal, is estimated at 3.14 cents, while refining, including cracking, amounts to 2.25 cents on an average. This makes, under present conditions, this marketing cost the largest single item in the price the consumer pays for his gasoline at the filling station.

Under more favorable conditions, with crude oil prices at more nearly normal levels, the cost of the raw material represents the largest item. For instance, at the middle of last year the cost of crude, it is estimated, amounted to 26.26 per cent of the retail price of gasoline. Now it is only 17.35 per cent. Marketing costs on the other hand remain practically fixed, with practically no difference in the cost today and a year ago, but with the general trend over a period of years upward.

Direct Sale Growth

Under present methods there is little possibility of effecting any radical cut in marketing cost. Every year the investment in marketing equipment has increased under the impetus of increased competition and the drive for gallonage. The most notable tendency in the past year or so, however, is that toward direct sales of gasoline.

Throughout the East the larger companies which previously sold largely through dealers have gone into gasoline selling through their own filling stations. The same is true of the large companies' operations in other sections east of the Rockies. The Texas Company and the Gulf Refining Co. have increased the proportion of their direct sales very substantially in the past two or three years. The Standard Oil Co. of New Jersey a few years ago did not operate filling stations in its territory comprising New Jersey, Delaware, Maryland, North and South Carolina and West Virginia, but now has hundreds of stations and is constantly increasing the number.

No satisfactory or complete industry survey of the costs entering into marketing of gasoline has been made. Such a survey would take into consideration the economic relationship of filling station and curb pump, of direct and indirect distribution, and duplication of distributing equipment.

Another important phase of such an investigation would be the comparison of marketing costs in the petroleum business with those in other industries. It is probable that the distribution costs in petroleum would show favorably against the major industries, and this in spite of the fact that in its offering of convenience and service the oil business has certainly filled the need of the most exacting motorist.

The obvious solution to the distribution problem is the elimination of duplication, but in the operation of competitive units in the business the accomplishing of this is, in effect, the elimination of competition. Under present conditions the company which closes up a station at a certain point because it has another a block away is not certain that the near-by station will get the trade lost in closing the first. It is more certain that another company will establish a station on the site of the one closed. From an industry standpoint the duplication still exists.

To Cut the Cost

The trend toward direct sales is a reflection of the companies' activities to cut the cost of distribution. While it involves an increase in the number of filling stations, it eliminates rehandling and middle profits which are a substantial part of distribution costs. In direct filling station distribution each station must be a profitable operating unit to have a place in the good business operation of the company and thus it makes for more efficiency.

To reduce the outlets for gasoline involves economic complications as well as those related to the public's reaction. Under present methods companies distributing gasoline have built up their business on the basis of numerous outlets, and the motorist has grown to expect the service and convenience he now has through the duplication in filling stations and curb pumps. Any radical reduction in the number of outlets would involve a campaign of education for the motorist. Instead of being able to buy his gasoline at every corner and on remote roads he would have to accustom himself to fill the tank of his car at the fewer stations and to the inconveniences of waiting his turn on the end of a much longer line than he encounters under the present system. This raises the question of dissatisfaction and complaint respecting service, and a public reaction against the oil companies which would be more serious than the complaints against the present service making the cost of gasoline too high.

It is an attribute of the American public that it is always willing to pay for quality, service and convenience. Retail prices of gasoline, as well as of all necessities and luxuries, reflect the high cost of "doorstep" distribution.

What the motorist is prone to forget, however, is that this high cost does exist in the distribution of gasoline. With the wholesale price of gasoline ranging from 6¼ to 9½ cents a gallon, depending on the point of shipment, he does not see why he should be paying anywhere from 11 to 25 cents per gallon at the pump and the filling station. However, in this spread are such costs as transportation, distribution, road and inspection taxes, and finally the differential demanded by the retailer for selling.

Generally speaking, the motorist has willingly paid the relatively high retail distribution costs for the maximum of convenience in securing his supplies. The retail price of gasoline represents only a small part of the average cost of operating an automobile—about one-eighth.

A survey of distribution costs would do much to clarify this situation for the industry and for the public, and a thorough discussion of the problem probably under the auspices of the Federal Oil Conservation Board might make possible co-operative action which would have beneficial results for the entire industry and for the public.

JUNE FIELD REPORT SHOWS DECLINE IN COMPLETED WELLS AND NEW WORK

A decline of 104 in completed wells and a drop of 86,880 bbls. in initial production, a falling off of 111 in rigs up and 146 in wells drilling were the outstanding features of the June report of operations in the fields east of California as compared with the report for May.

The big drop in initial production was occasioned partly by the fact that Salt Creek operators in Wyoming completed some very large wells in May, while in June Wyoming completions were largely of the routine order. Gulf Coast also shows a very considerable let down in initial production, while Oklahoma showed only a little increase.

The present day overproduction of oil cannot be blamed on too much general drilling, as field operations, taken as a whole, are at a lower ebb than they have been for a long time. Outside the flush fields there is a great slackening of drilling and a general tendency to wait until the oil flood is over before starting drilling programs on a large scale.

SUMMARY OF ALL FIELDS

Field—	Comp.	Prod.	Dry	Gas
Eastern	443	2,174	38	59
Central Ohio	25	250	7	8
Lima	18	118	4	2
Indiana	37	455	15	8
Illinois	11	191	2	1
Michigan	25	506	0	2
Kentucky	76	2,668	19	3
Tennessee	3	450	0	0
Florida	1	0	1	0
Kansas	112	5,689	56	9
Oklahoma	362	201,450	108	33
N. Cen. Texas	279	28,563	116	9
West Texas	47	18,014	11	0
Texas Panhandle	77	12,875	6	2
East Cen. Texas	8	0	8	0
Gulf Coast	88	39,345	34	4
Southwest Texas	53	139	33	12
Arkansas	32	1,337	15	4
North Louisiana	72	1,863	32	15
Wyoming	32	6,647	2	0
Montana	46	2,528	19	3
Colorado	12	410	8	1
New Mexico	4	120	3	0
Utah	1	0	1	0
Total, June	1,865	325,792	538	175
Total, May	1,969	412,672	589	186
Difference	104	86,880	51	11

SUMMARY OF NEW WORK

Field—	Rigs	Drlg.	Ttl.
Eastern	116	385	501
Central Ohio	21	68	89
Lima	1	24	25
Indiana	2	44	46
Illinois	3	38	41
Michigan	2	60	62
Kentucky	4	149	153
Tennessee	0	38	38
Kansas	51	209	260
Oklahoma	166	1,093	1,259
North Central Texas	29	407	436
West Texas	35	285	320
Texas Panhandle	29	257	286
East Central Texas	0	18	18
Gulf Coast	44	153	197
Southwest Texas	25	121	146
Arkansas	16	46	62
North Louisiana	38	103	141
Wyoming	31	236	267
Montana	6	137	143
Colorado	6	96	102
Utah	2	35	37
New Mexico	12	125	137
Total, June	650	4,152	4,802
Total, May	761	4,298	5,059
Difference	111	146	257

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	15	869	3	1
Creek	45	9,077	16	7
Grady	20	1,465	6	7
Hughes	6	575	3	
Kay	19	8,303	7	3
Muskogee and Wagoner	14	204	7	3
Okfuskee	5	1,907	2	2
Okmulgee	14	45	8	2
Osage	36	10,322	7	1
Pawnee	13	218	8	1
Pottawatomie	10	10,456	1	..
Seminole	108	154,304	12	2
Stephens and Cotton	10	2,710	4	1
Tulsa	10	45	5	2
Miscellaneous	37	950	19	1
Total June	362	201,450	108	33
Total May	372	197,341	125	49
Difference	10	4,109	17	16

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Carter	9	36	45
Creek	32	61	93
Garfield	2	15	17
Grady	3	52	55
Grant	1	8	9
Hughes	1	14	15
Kay	3	42	45
Lincoln	1	12	13
Muskogee and Wagoner	5	24	29
Okfuskee	11	27	38
Okmulgee	11	21	32
Osage	10	47	57
Pawnee	3	14	17
Payne	1	14	15
Pontotoc	5	22	27
Pottawatomie	10	102	112
Seminole	47	444	491
Stephens and Cotton	5	35	40
Tulsa	1	12	13
Miscellaneous	5	91	96
Total June	166	1,093	1,259
Total May	218	1,180	1,398
Difference	52	87	139

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	17	1,590	5	0
Cowley	10	459	3	1
Chautauqua and Elk	5	57	3	0
Greenwood	14	35	11	1
Sumner	5	1,687	2	0
Miami	32	550	17	0
Miscellaneous	29	1,311	15	7
Total June	112	5,689	56	9
Total May	105	11,501	40	6
Difference	7	5,812	16	3

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	11	39	50
Chautauqua and Elk	0	16	16
Cowley	8	22	30
Greenwood	7	21	28
Marion	0	11	11
Reno	2	7	9
Sumner	8	16	24
Miscellaneous	15	77	92
Total June	51	209	260

NORTH CENTRAL AND WEST TEXAS

Summary of Completed Wells

County—	Comp.	Prod.	Dry	Gas
West Texas—				
Crane	14	7,937	0	0
Crockett	1	0	1	0
Howard	4	705	0	0
Jones	3	0	3	0
Mitchell	3	151	0	0
Nolan	1	0	1	0
Pecos	3	3,577	2	0
Taylor	1	0	1	0
Upton	16	5,394	3	0
Winkler	2	250	0	0
Total West Texas	48	18,014	11	0
North Central Texas—				
Archer	33	1,757	18	0
Brown	63	17,811	11	1
Callahan	11	39	7	1
Clay	5	15	3	1
Coleman	7	0	7	0
Comanche	1	55	0	0
Cooke	14	1,584	6	0
Denton	1	0	1	0
Eastland	16	1,627	7	1
Fannin	1	0	1	0
Jack	4	177	0	0
Montague	19	464	5	2
Shackelford	15	508	13	0

(Continued on Page 135)

Senator Borah Urges Oil Conservation

Puts It Squarely Up to the Industry. Believes Government Is Poorest Business Man in the Country

By Senator W. E. Borah*
of Idaho

Last September the Federal Oil Board filed a report designed to give the facts touching the oil situation in this country. Among other things in this report is the startling statement that the known oil fields of the United States hold oil sufficient to supply this country for six years and probably no longer. The United States Geological Survey reports tend to support this statement. Let us multiply six by three by five and still it is an alarming proposition, and full of significance.

As the world is now organized, oil is an essential element of national power, an indispensable factor in national security. Without oil in these days a nation faces an economic vassalage.

As a distinguished foreign diplomat said in 1919: "Who has oil has empire. . . . Control of the ocean by heavy oils, control of the air by highly refined oils, and of the land by petrol and illuminating oils. Empire of the world through the financial power attaching to a substance more precious, more penetrating, more influential in the world than gold itself."

Nevertheless, what is being done to conserve through sane use this vital element in our national life? A short time ago the producers of oil appeared in Washington and advised the Government that there was an "orgy of production;" that many fields were being damaged, or ruined, through careless or hasty drilling operations, and revealed beyond peradventure that one of nature's most generous donations to the service and comfort and luxury of the people is being literally, shamelessly wasted in a manner "without precedent in all past history."

Most Important Problem

Having made this confession, they asked that the Government exert its sobering influence upon this humiliating debauch, this saturnalia of recklessness and shortsighted greed. The statements and admissions of the producers, in the face of the report of the oil board, constitute not only an offense against every man, woman and child in the land, but in effect a conspiracy against the security of the nation itself.

And when you link the confessions of the producers with the admissions of no remedy upon the part of the Government, it constitutes about the most important problem which could present itself in the growth and development of the country.

The improvident manner in which the natural wealth of the country is being thus gorged by individuals, wasted and exhausted, should no longer, and can in reason no longer, remain a matter of unconcern to the people of this country.

The other event is the devastating flood in the Mississippi Valley. Mr. Hoover, who has surveyed the scene of desolation and misery, and whose services in the matter are beyond price, regards it as the greatest peace time calamity in the history of our country. Here again is waste.

I might with equal propriety and effect refer to timber, coal and power. But any one who will go far into the situation will readily conclude that we, as a people, as a nation, should turn our attention to working out an intelligent and permanent national program, a national policy, to conserve for the benefit and use of all the most marvelous natural wealth which nature's God ever gave into the keeping of a people—to stop this improvident and ultimate impoverishing waste, and by economic use add to nature's wealth and the people's comfort.

Welfare of Nation

Whether it is oil or rivers, or water power, or soil, the same pressing, commanding inquiry presses itself upon us. It is my observation and my belief that these great problems never find a wise solution until the attention and the purpose of an entire nation is concentrated upon them. Casual and incidental consideration leads to temporary and makeshift results.

These things present national problems. They involve the welfare of the nation as a whole. They involve no less than the security of the republic and the perpetuity of our institutions.

We have been so abundantly blessed that heretofore little occasion has arisen for the consideration of these things. In addition to that, the Great War has for past 12 years directed the attention of the Government and the people away from these matters. But it is time to turn our attention homeward to these domestic problems, the longer neglect of which means incalculable injury and, in some respects, irreparable injury.

The relation which the Government should sustain to these matters presents a difficult problem. If democracy fails, as so many in these times are willing and anxious to prophesy, it will be in its vain effort to meet efficiently and effectively the problems presented by the modern industrial world—its failure to find the true line of demarkation between business and government, individual responsibility and public control, the line "which will combine that degree of liberty, without which law is tyranny, with that degree of law without which liberty becomes license."

To find out how we shall preserve personal initiative and the fruits of personal ambition along with the conservation of the public interests and the advancement of the public good is to give new assurance to democratic principles.

Government Poorest Business Man

For myself, I think the poorest business man which this country has yet produced is the Government. The most extravagant and demoralizing form of government with which we are throughout history familiar is a bureaucracy. Some bureaucracy we must have, some we shall always have, but in the name of humanity, how much! And yet the problem is here—what are the proper limits of the functions and agency of government? To what departments of human affairs shall government authority extend, and how far and in what way?

As to our interstate waterways the authority and the obligation of the Government seem clear and unmistakable. There is ample authority in law and there is commanding authority in the situation. Making our rivers both safe and serviceable is not local but general, not sectional but national, not politics but business.

But while the course and the duty of the Government seem reasonably plain in the matter of our waterways, it is not so easy to determine our course or what it is wise to do as a Government when it comes to dealing with the problems which oil, power and coal present.

The oil producers who are among the ablest and boldest of our business men, have appeared and asked the Government to protect them against themselves, to stop their wasting the nation's wealth, to exercise its influence in behalf of sanity. The power people have not yet appeared but they are in some respects overdue. The coal men have in a way appeared. Our virgin forests are already gone. The public lands are practically exhausted. The pioneer, one of the finest and noblest factors in nation building, is quietly passing out.

Depends on Owners

We are, of sheer necessity, turned back upon ourselves—circumstances force the hour of introspection. We must take stock. The greatest domestic problem since the Civil War is: What shall the Government do and how shall it exercise its purpose? Public interests demand that this waste cease. Justice to the people demands that unjust prices and exploitation shall be prevented. Common sense and the most ordinary tenets of humanity insist that our rivers shall no longer be a menace to millions of our countrymen.

Government dominance or control or government ownership will depend very largely, if not wholly, upon the action and conduct of those who own or are in control of these things. If waste continues and reckless exploitation prevails, if the people are charged unreasonable prices, the Government will have no alternative; it will have to go as far as is necessary.

It is a sound rule that the Government should not undertake to do what the citizen can do equally well or better for himself. But this sound rule the Government must disregard when individuals disregard the welfare of the nation or the public weal.

If those in charge of our great natural wealth and our utilities do not want government interference or ownership, it is largely in their hands not to have it. It is very generally recognized as a wise rule and that the interests of society are best served by leaving use and control of property to the initiative, judgment and discretion of the owner.

But this can remain true only so long as that use is not in conflict with the fundamental rights and interests of the people or the nation. From the standpoint of the public, that which is economically unsound is morally wrong. The public has an interest in these properties and under certain conditions or circumstances that interest may become controlling.

*Before International Advertising Association at Denver, Colo.

FARMINGTON, NEW MEXICO, WORK DELAYED BY RAIN AND FLOOD

By Special Correspondent

FARMINGTON, N. Mex., July 2.—Oil operations have been delayed here because of the heavy rains and flood conditions. Those having machinery and supplies to move over unsurfaced roads deemed it unwise to start out until the roads were in better condition. Only wells that had supplies on hand could keep on drilling, and only those well sheltered could continue through the heavy rains. The moving in of the Huntington Park machinery and the transfer of the Portage rig to new location have necessarily been delayed. Test work has continued at Hospah, Bloomfield and Blanco and tests in other districts and on other structures will soon be under way, as the weather has now cleared and rivers are going down.

The promoters of the San Juan Petroleum Corp. well, which made a heavy showing of wet gas in the Pictured Cliff sands, have decided to put in heavier machinery and go on down to the Mesa Verde sands. They are closed down awaiting the arrival of new machinery, and in the meantime it will be decided whether the test will be made in the old or a new hole.

The Williams-Staplin well in the Hospah district is reported to have struck water in the Mesa Verde sand at a depth of 1,790 feet, being some 250 feet lower on the structure than the producing Midwest Refining well No. 1. This is in Section 30-18-8, about a mile and a half northeast of the producer. It is stated they are planning to go down to the Dakota in this hole. They believed they were higher on the structure than the Midwest No. 1, but the drill did not show it. This well and Midwest No. 2 would seem to indicate the structure is not as large as at first hoped, but it will take further drilling to determine this definitely. Perhaps the next drill to reach the Mesa Verde sands in this district will be the Producers & Refiners, drilling in Section 25-18-9. The Midwest No. 1 was drilling below 2,200 feet at last report on the way to a test of the Dakota sand. If production is encountered in this sand it will again stimulate development work in that district.

It is stated that the Ohio Oil Co. has definitely decided to drill the Stoney Butte structure, located about 40 miles south of Farmington, and that preparations to this end are now under way. While this is not official, it is believed here to be reliable.

The Portage Oil Co., operating on the Glade structure, in its new location, Section 25-31-13, has its camp houses up and the new 40-horsepower boiler on the ground. It has started rigging up and expects to start the drill in a week or 10 days. The Mesa Verde sand is the objective.

The Huerfano Oil Co., operating in the Bloomfield district, Section 25-29-11, is drilling after getting the artesian water shut out and is in a brown shale at 340 feet.

Bloomfield District

The Mid-Continent Oil Co., operating in the Bloomfield district, has resumed drilling after a short delay on account of the ditch supplying water breaking, and struck another flow of artesian water at 603 feet. It was still in artesian sand at the bottom of the hole, which is now 618 feet. When it has passed this sand it will pull the casing and straightream to make the water shut off.

The Wiley & Craft well, sometimes called the Paramount Petroleum Co. well, which came in a small producer last week, is intending to go deeper but has had some trouble about water supply which has caused delay. It is running tubing and will test the well as it stands before going deeper. It is believed to be good for from 3 to 5 bbls. per day under pump. The oil is of the same high gasoline content that has marked all the oil in this district. The hole is bottomed at 792 feet.

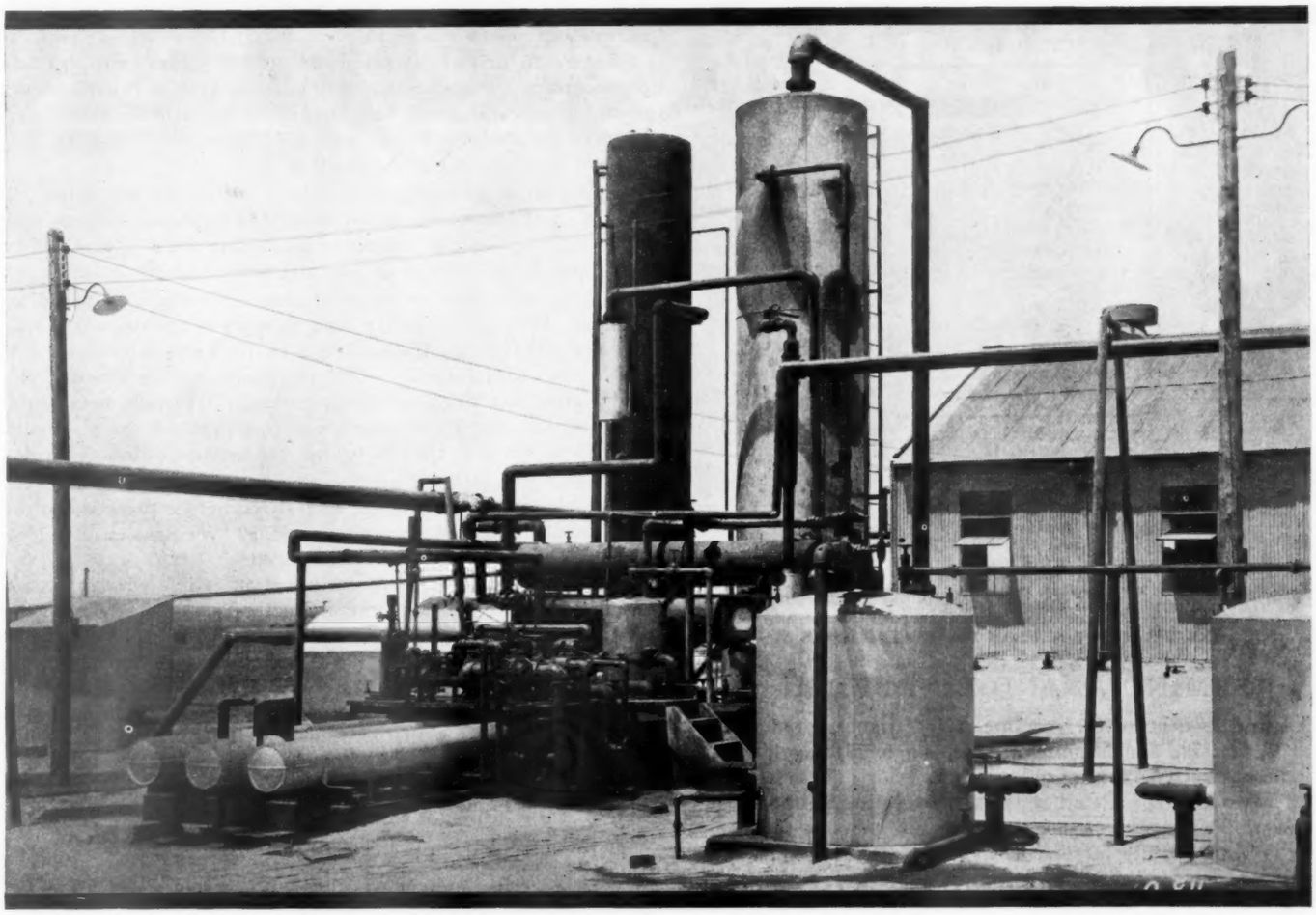
The Taylor-Burke interests on the Mancos are spudding No. 4, one-half mile west of the last producer, to test out the structure. It is the intention to drill several edge wells to get an idea of the extent of the structure in order to arrange for storage or pipe line facilities.

The T. C. N. Oil Co., operating in the Bloomfield district, Section 9-29-11, shut down during the storm and made some repairs on the motor, but is drilling and running tour. It is about 890 feet in a sandy shale, which it has had for about 130 feet. It has had four showings of oil in this formation and one good showing of gas. While it will drill deeper to production, it is believed higher on the structure, the difference in depth being due to surface conditions.

The Dysart well on the Ambrosia struc-

(Continued on Page 88)

Again—at Borger, Texas—



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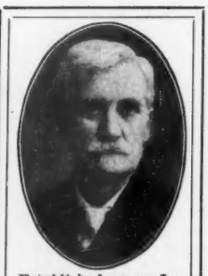

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SEMINOLE AND LINDBERGH

The world's demand for gasoline and petroleum products continues to increase and is going to keep on increasing long after Seminole has become a memory.

When we first speculated about the saturation point for automobiles people thought of one car to a family. Now the two-car family is being rapidly increased, not as a matter of luxury but as a matter of convenience and practically of necessity.

The use of a car has increased earning power so that it will seem easier to get a second car than the first. A people become accustomed to instant means of transportation will be impatient if even temporarily deprived of it. The growing independence of women and even children will not be content without it.

And the car that is bought for the family will be used more than the one that takes the owner to and from his work. Thus the demand for gasoline will be again increased.

Meanwhile the consumption by trucks and buses has become a big factor, especially noticeable in the winter months once thought unsuitable for motor use, combining with the closed car to raise the demand curve throughout the entire year.

The only limiting conditions on automobile growth visible are lack of more highways and better parking arrangements, difficulties that will no doubt be overcome when public opinion determines.

Automobiling has long passed the adventure stage when one never knew on starting out how he was to get back. The dependability of modern cars is the biggest inducement for gasoline consumption. The 23,000,000 owners know they can get their money's worth out of their investment and are set on getting it.

It seems laughable now to recall that people were ever afraid of the automobile, just as today they are afraid of the airplane. In the early days of experiment and lack of skill in driving accidents were far commoner than they are now in the air.

The thought of almost everyone driving an automobile would once have seemed as visionary as the idea of general use of the airplanes may seem now. But motors have been made so simple in operation and so fool proof that simple and fool proof airplanes do not seem impossible.

The exploit of Lindbergh, the Bellanca trip, the Hawaiian flight and the voyage of Byrd and his companions have fascinated public attention and caused greater faith in the stability of the airplane. They are causing people to inquire into the causes of aviation accidents rather than assuming they are inevitable.

We are beginning to realize that while aviation accidents get into the papers the thousands of flights without accident do not. For instance, last year there were but two fatal accidents in the air mail service or one casualty to each 1,288,000 miles flown.

Some 676 private planes made 258,000 trips, carrying 205,094 passengers and traveling 5,396,672 miles in 1926 in this country.

More than 300 cities have municipal air fields. There are 226 commercial landing fields, and 2,782 emergency landing places mapped out throughout the country.

Last year American airplane plants turned out 621 ships. Outside of the Government orders American airplane factories or factories making airplane engines or parts have found their chief business abroad, and notably in South American countries.

Thirty years ago we were turning out only a thousand automobiles. Who will dare say that 30 years hence there will not be as many planes in the United States as there are automobiles today?

No one could foresee in 1898 the enormous development of the oil business resulting from the automobile. It would have required a greater stretch of the imagination a generation ago to predict a car a family in 1927 than to foresee the multiplication of airplanes.

Lindbergh and Byrd are conservative in estimating that transatlantic aerial service may not be realized before 10 years, but overland aerial traffic will not wait that long. We have only to look at what is already accomplished in Europe.

The Kansas City Star recently had an article written by a correspondent after a visit to the Tempelhof air field at Berlin which is of special interest to the oil industry as showing the possibilities.

While France, England and America have been devoting their energies largely to the military ideals of speed and distance in aerial development, Germany, limited by the peace terms, has centered its activities on the development of the commercial airplane in which carrying capacity and safety are the essentials.

The Tempelhof Field is aptly described as Europe's union aerial station, with 25 planes to foreign capitals arriving and departing daily practically on a railroading timetable and scores of others flying to other points.

The big international planes carry 10 persons and dwarfed the Bellanca in comparison. The big German planes could not cross the ocean, having neither the speed nor distance possibilities of Lindbergh's or Byrd's ships, but day in and day out they cover their routes with railroad-like regularity.

There is nothing fanciful about the way the Germans are developing commercial air travel. America might benefit from the interview with Director Otto Merkel of the Luft Hansa, whose advertising slogan is "Luft Hansa by Air to Anywhere."

Admitting that it is not yet on a paying basis, Director Merkel says commercial air traffic, like the railroads that developed our West, will have to be assisted at the outset by government subsidy. Air mail subsidy he considers a waste since larger planes might as well carry passengers and help pay for their upkeep. Otherwise it is like having railroads carry mail alone.

Incidentally, all this commercial air development costs Germany is $10,000,000 a year. The United States is spending $20,000,000 on its naval air service and $15,000,000 on the army air service. A like sum devoted to emulating the German method might greatly hasten our practical air traffic.

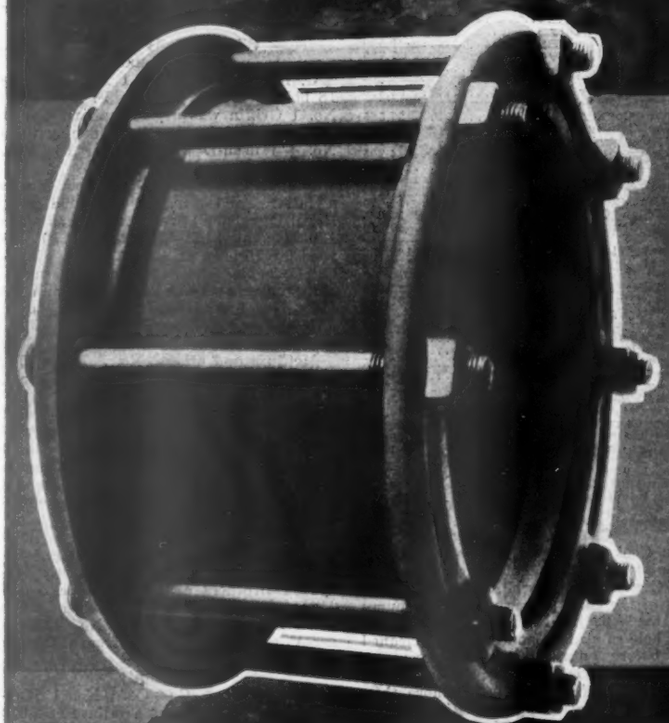
Director Merkel points out that air fares on the German lines are about the same as first-class rail fares. Without the government subsidy the rates would be in the luxury class and he adds that in the pioneering stage the public must pay the bill either by higher fares or through government aid.

Although aviation was discovered in America, we have lagged behind in practical use. Perhaps the German success indicates why.

Is there any good reason that we should not make as good a showing as any one if we go about it right?

Aerial history has been made in the past few weeks. We are only at the beginning of the gasoline age.

DRESSER



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COUPLINGS

Dominate!

Yates Well Breaks Initial Records

Variously Estimated Between 15,000 and 20,000 Bbls. at the Close of Week. Church-Fields Pool Gains 7,838 Bbls.

By C. D. Lockwood
Staff Correspondent, North and West Texas

FORT WORTH, Tex., July 4.—The record-breaking shallow producer in the Yates Pool continued to be the chief interest of a quiet week in West Texas.

Daily average estimated production in West Texas jumped 11,511 bbls., due to the Mid-Kansas and Transcontinental's No. 6 Yates-A, in the Yates Pool, which flowed more than 10,000 bbls. daily into steel tanks and an unknown quantity into earthen storage and surrounding canyons for several days before it could be shut in. The Church-Fields Pool in Crane County also contributed to this increase with a gain of 7,838 bbls. while all other areas declined.

All West Texas records for initial production were shattered by the Mid-Kansan and Transcontinental's No. 6 Yates-A in Section 34½, 500 feet south of No. 1-C, when it flowed 10,209 bbls. into a 55,000-bbl. steel tank through a 6-inch line and several thousand barrels additional went into earthen storage. After several days' effort, the 10-inch pipe was cemented but the 6-inch and 8-inch were hanging and the tools are in the hole, the line having been cut. This well was variously estimated from 15,000 to 20,000 bbls. daily and at the close of last week, after the 10-inch had been cemented, it was flowing 650 bbls. through a 3-16-inch choke. All of this production was made and is still being made with the tools in the hole. The total amount saved from this one well during the period when it ran wild from 7 p. m. June 23 to 7 a. m. June 30 amounted to 53,837 bbls.

Last Wednesday the Illinois Pipe Line Co. resumed deliveries to the Humble Oil & Refining Co. at McCamey after a shutdown of several days while the new 8-inch line, paralleling the 6-inch, was being connected. Wednesday and Thursday a total of 20,000 bbls. were delivered, making up for lost time. The Illinois Pipe Line Co. is building a 30-car loading rack at Hurdle on the Orient railroad and as soon as it is completed will start shipping out Yates Pool crude in tank cars.

Ector County Tests

Ector County was watched with interest this week because of the shooting of J. S. Cosden's No. 3 Connell-A. It was shot with 200 quarts from 3,465-3,545 feet and filled up 1,400 feet in 14 hours. The bottom hole shot, however, is thought to have let in water. It swabbed 7 bbls. from 7 a. m. to noon, June 30. Cosden's No. 2 Connell-A swabbed and flowed 82 bbls. from 4 p. m. June 29 to noon the next day but the swab wouldn't go lower than 500 feet off the bottom due to collapsed casing, which resulted from the shot reported last week. Top of pay is 3,471 feet and total depth 3,515 feet. Hard luck in shooting has hampered all three of the wells drilled in this area, the discovery test having been held up a long time due to collapsed pipe caused by premature explosion of a shot.

The Roxana Petroleum Corp. and Llano Oil Co.'s No. 1 Scarborough in Winkler County was last reported drilling at 3,208 feet with 300 feet of oil in the hole from 3,124-28 feet.

The merry race along the Landreth strip in Crane County continues unabated and production of the field likewise continues to climb. During the past week several new locations and rigs were added. Landreth Production Corp. now has the twelfth rig started and Gulf Production Co. has Nos. 30 and 31 under way. Gulf's No. 30 J. T. McElroy is located 200 feet south and 3,630 feet east of NW cor. Section 200, Block F, and No. 31 is 771 feet south and 3,300 feet east of the same NW cor. These wells offset Landreth's No. 11 and Tidal Oil Co.'s No. 2 University-I, which is north of Landreth's No. 11. Landreth's No. 12, offsetting Tidal's No. 2 University-G, is one location west of his No. 10. The location for his No. 13 has not been announced but will probably be a location west of No. 12 because The Texas Company has made a location in the SE cor. W half SW, Section 46, and this will call for an offset by Landreth. Landreth's production Saturday was 4,145 bbls. from six wells.

Church-Fields Pool

Gulf's No. 8 State-Lasseter in the northeastern part of the Church-Fields Pool, Section 35, Block 30, was shot with 160 quarts from 3,012-77 feet and cleaned itself, putting 1,200 feet of oil in the hole but not flowing. Top of the gray lime in this well was 2,935 feet and top of pay 3,017 feet. Same company's No. 9 State-Lasseter topped the gray lime at 2,955 feet and the pay at 3,036 feet. At latest reports it was drilling at 3,070 feet with 2,000 feet of oil in the hole.

Gulf's No. 16 J. T. McElroy along the north line of the McElroy block, offsetting Landreth's No. 6 Cowden-Anderson, is one of the next wells due in and will tell something about the width of the productive acreage in this part of the field. It had a show of oil at 2,764 feet and at 2,825 feet flowed 205 bbls. while cleaning out. Tidal Oil Co.'s No. 1 University-I was drilling at 2,900 feet Saturday, top pay 2,780 feet, and has not flowed.

In Crockett County, Gulf Production Co. is building a rig for an offset to P. H. Williams' No. 1 Powell, south of the field. It is 155 feet north and east of SW cor. of Gulf's 160-acre lease in the east half of Section 62, Block BB, G. C. & S. F. Survey. The Williams well was completed for 350 bbls. on the pump at 2,951 feet.

Landreth's No. 6 Cowden-Anderson was shot with 240 quarts from 2,785-2,910 feet, top of pay 2,725 feet, and flowed 945 bbls. in the first 17 hours.

North Central Texas was quiet during the past week and very little of interest developed. Some excitement prevailed for a brief period when erroneous reports regarding Sinclair Oil & Gas Co.'s No. 10 Nail in Shackelford County were circulated but this quickly evaporated. This well, located on the lime between Sections 150 and 151, or CNL NE Section 150, topped a sand at 1,412 feet which was good for about 50 bbls. It was beautiful brown sand and the contractor and others became excited, thinking they had the long awaited duplicate of the Cook Ranch Pool which lies about 7 miles southeast of the Nail Ranch test. However, at 1,420 feet large quantities of water drowned out hopes of a well in that sand. The test will be carried on down, as this sand is above the Cook Ranch pay.

NORTH CENTRAL TEXAS ESTIMATED PRODUCTION
Week Ending July 2, 1927

Ranger District—	
Brown County	21,900
Callahan County	4,185
Coleman County	1,150
Comanche County	1,530
Palo Pinto County	430
Ranger	9,930
Shackelford County	7,795
Stephens County	9,900
Total Ranger District	56,820
Wichita Falls District—	
Archer County	27,585
Baylor County	90
Clay County	710
Cooke County	4,205
Jack County	615
Montague County	12,120
Throckmorton County	2,100
Wichita County	31,090
Wilbarger County	13,095
Young County	10,940
Total Wichita Falls District	102,550
Total North Central Texas	159,370
West Texas District—	
Big Lake Field	24,675
Crane County	61,935
Crockett County	840
Ector County	15
Garza County	5
Glasscock County	40
Howard County	2,895
Jones County	1,915
Loving County	25
Mitchell County	3,764
Pecos County	10,034
Scurry County	20
Upton County	20,185
Winkler County	1,810
Total West Texas District	127,658
Grand total North and West Texas	287,028
Total last week	276,992
Increase	10,036

Cooke County Area

In Cooke County, the Danciger Oil & Refining Co.'s No. 1 Harris, known as the Gist & Grady well, in the western part of the county, was put on the pump and made 62 bbls. in the first 12 hours. The hole sanded up and had to be cleaned out before pumping could be resumed. This 62 bbls. is an accumulation of several weeks, of course, but is more than many conservative scouts estimated the well would make. It is the discovery producer in that area.

Oil was run through the Sinclair line from Bulcher to Nocona during the week and the remainder of the line to Muenster is about ready. Roxana Petroleum Corp. is laying a 4-inch line from Muenster to its lease in the Hooser Pool and expects to continue the line to Healdton, Okla., where it will connect with the company's (Ozark Pipe Line Co.'s) main system to St. Louis. At present, Roxana is shipping crude in tank cars from its loading rack at Muenster to its refinery at St. Louis at a cost of 72 cents per barrel.

In Throckmorton County, Humble Oil & Refining Co.'s No. 1 Langford, Section 987, T. E. & L. Survey, located 466 feet from the south and east lines of the NE, has a hole full of oil from lime at 3,915-16 feet.

NORTH CENTRAL TEXAS COMPLETIONS

Wichita Falls District

Archer County

G. S. Anderson's No. 1 Hughes made 18 bbls. at 600-02½ feet. F. M. Blair's No. 1 Griffin was dry and abandoned at 2,002 feet. Atlantic Oil Producing Co.'s No. 4 Wilson-D was good for 180 bbls. at 1,528-44½ feet.

Pandem Oil Corp.'s No. 1 Looney was a failure and plugged at 1,408 feet. Royal Petroleum Co.'s No. 9 Wilson made 120 bbls. at 1,531-43 feet; No. 10 was good for 75 bbls. at 1,524-38 feet. Simms Oil Co.'s No. 11 Turbeville-B was a 10-bbl. pumper at 1,488-1,501 feet. Sun Oil Co.'s No. 1 Andrews made 28 bbls. at 907½-16 feet.

Clay County

McClure and others' No. 2 Barry, Jr., was completed for 20 bbls. at 756-65 feet.

Cooke County

J. K. Hughes Developing Co.'s No. 1 Hopkins was dry and abandoned at 2,507 feet. Kewanee Oil & Gas Co.'s No. 1 Timmis-A swabbed 109 bbls. in 10 hours from broken sand at 1,139-1,230 feet and was running 5-inch pipe; No. 2 Dennis-A made 85 bbls. at 1,290-95 feet.

Oil Operators Trust Co.'s No. 5 Kleiss was completed for 164 bbls. after a 20-quart shot in sand at 1,561-99 feet. Richardson Brothers abandoned their No. 1 Moore & Richolt as a dry hole at 2,430 feet. Stroube & Stroube's No. 4 Koelzer-A gauged 185 bbls. from sand at 1,613-41 feet.

Jack County

Prairie Oil & Gas Co.'s No. 1 Kuykendall was plugged as a failure at 2,013 feet.

Montague County

Skinner and others' No. 2 Maddox made 15 bbls. at 805-15 feet.

Throckmorton County

Humble Oil & Refining Co.'s No. 1 Reynolds was dry and abandoned at 2,510 feet.

Wichita County

L. P. Hammond and others' No. 1 Munger was estimated good for 50 bbls. in sand at 1,759-60 feet. Magnolia Petroleum Co.'s No. 4 Maer-A made 5 bbls. of oil and 1 bbl. of water on the jack from sand at 869-72 feet.

Murchison Oil Co.'s No. 1 Rio Bravo was dry and abandoned at 2,001 feet. John O'Neil's No. 1 Woodward, Block 209, was also a failure at 2,512 feet as was Panhandle Refining Co.'s No. 3 Daume at 694 feet. Shappell Oil Co.'s No. 9 Kemp & Kempner pumped 55 bbls. from sand at 1,610-20 feet.

Wilbarger County

Atlantic Oil Producing Co.'s No. 4 Sigler-Waggoner was abandoned as a duster at 3,001 feet. Consolidated Oil Co. and J. S. Cosden's No. 6 Waggoner, Section 57, flowed 130 bbls. from sand at 1,218-38 feet. Fain-McGaha Oil Corp.'s No. 1 Belcher was a dry hole at 2,617 feet.

Phillips Petroleum Co.'s No. 4 Wag-

(Continued on Page 134)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ending July 2

ANDREWS COUNTY

Company, Farm and Location—	Remarks—
Calvin & Belt's No. 1 Ratliff & Bedford, C NE Sec. 16, Blk. A-54	Rig.
J. S. Cosden's No. 1 Ratliff & Bedford, C SE Sec. 3, Blk. 73, Public School Land	Rigging up.
Sartain Oil Co. et al's (was Deep Rock Oil Co.'s) No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School Land	Shut down 100 ft.
C. B. McKennon's (was Neff et al's) No. 1 J. S. Means, C SE Sec. 12, Blk. A-35, Public School Land	Spudded 30 ft. and shut down.
A. G. Carter & Zweifel's No. 1 Cowden, C SE Sec. 18, Blk. A-52, Public School Land Sur., elev. 3,156 ft.	Top salt 1,375 ft.; shut down for orders 3,500 ft.
Maer & Staniforth's No. 1 W. B. Taylor, C SE Sec. 15, Blk. A-42, Public School Land Sur., elev. 3,315 ft.	Top salt 1,650 ft.; little gas from 3,010 ft.; drilling 4,105 ft.; gray lime.

BORDEN COUNTY

J. L. Kennedy's No. 1 J. S. York, SE cor. Sec. 322, Blk. 97, H. & T. C. Sur.	Fishing tools 980 ft.
Stivers et al's No. 1 Snodgrass, C NW Sec. 475, Blk. 97, H. & T. C. Sur.	Shut down 3,000 ft.; lime; contract depth.

BREWSTER COUNTY

McPhail & Kemper's No. 1 Brown, C Sec. 43, Blk. W.IC-8, T. C. R. R. Sur.	Location.
McPhail & Kemper's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 240 ft.

COKE COUNTY

Danciger O. & R. Co.'s No. 1 Mrs. Byrnes, Clinton Sur.	Shut down for casing 602 ft.
Lipan Oil Co.'s No. 1 S. M. Conner, Sec. 71, Blk. 2, H. & T. C. Sur.	Shut down 1,215 ft. for 10-in.

(Continued on Page 81)

Late News from the Fields

LOUISIANA-ARKANSAS

SHREVEPORT, La., July 5.—Haynes Brothers' No. 1 Murray, Section 14-21-15, Pine Island Field, Caddo Parish, which was bailed in Sunday flowing at the rate of more than 12,000 bbls. daily was flowing today through a 1⅛-inch choke and a 6-inch flow line at the rate of 6,500 bbls. of clean 42.3 gravity oil daily. The well was originally completed two weeks ago at 3,671 feet in the Trinity horizon, making 20,000,000 feet of gas daily, and was deepened 14 feet to 3,685 feet. Several offset locations already are being staked and companies having gas wells on adjoining leases are preparing to deepen their wells into the horizon.

Magnolia Petroleum Co.'s No. 1 Logan, Section 17-10-12, southern De Soto Parish, Louisiana, is standing with a hole full of oil from a broken formation at 3,159-73 feet. Two and a half inch tubing is being set to flow the well. This is a 3-mile north extension to the Pleasant Hill Field of northern Sabine Parish.

Northwest Louisiana Gas Co. has completed No. 1 Coyle, Section 22-21-10, Cotton Valley Field of Webster Parish, flowing 3,000,000 feet of dry gas daily from a total depth of 4,409 feet.

OKLAHOMA

The Greater Seminole Field touched a new figure for high production on four successive days of the current week when it made over 431,000 bbls. daily. By pools the field made the following figures:

Pool—	July 3	July 4	July 5
Bowlegs	195,483	197,332	196,350
Earlsboro	99,345	97,947	99,553
Seminole	101,308	100,192	101,298
Searight	35,231	35,715	33,932
Total	431,367	431,186	431,538

The new well of the Indian Territory Illuminating Oil Co. in Section 1-7-6 is flowing at the rate of 542 bbls. hourly from the Wilcox sand and a limitation agreement is in effect whereby the well will be allowed to flow wide open for a period of 100 days, and after that it and the other wells in the immediate territory will be limited to an output of 100 bbls. daily each.

The Slick wildcat well in Pontotoc County, Section 21-5-6, is still reported making several hundred barrels of oil which tested 22 per cent water and 6 per cent b.s. It is shut down waiting for pipe line accommodations.

In the north end of the Seminole city pool the Pure Oil Co.'s No. 3 Aldridge, NE cor. SE Section 3-9-6, is flowing 2,175 bbls. from sand 4,343-4,375 feet. A disappointment in the Bowlegs area is the Gypsy Oil Co.'s No. 1 Dossey, SW cor. NW Section 4-8-6, which found a hole full of water in sand 4,550-4,565 feet. A light well at Bowlegs is the Indian Territory Illuminating Oil Co.'s No. 2 Bowlegs, SW cor. SE NE Section 22-8-6, which is swabbing 65 bbls. daily from sand 4,178-4,185 feet.

In southern Oklahoma, Wirt Franklin's No. 4 Apple-Franklin, NE cor. NE Section 21-1s-4w, Stephens County, had a series of sands 2,392-2,841 feet, and is flowing 35 bbls. an hour of 33 gravity oil.

At Earlsboro, Barnsdall Oil Co.'s No. 1 Hearn, NE cor. NE Section 15-9-5, swabbed 75 bbls. of oil daily from sand 4,311-4,318 feet. The oil was 45 per cent b.s. and water.

In the old Seminole Pool, Philmack Oil Co. and the McCulloch Oil Co.'s No. 3 Butler, NE cor. SE NE Section 35-9-6, is flowing 4,010 bbls. from sand 4,100-4,129 feet.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., July 5.—O. O. Owens' Mills Ranch wildcat in northwestern Pecos County, 50 miles down the river from the Yates Field in eastern Pecos County, has drilled itself in 2 feet to a total depth of 2,521 feet and the gas increased to 4,000,000 feet. It is making five bailers of water a day, thought to come from above, and is moving in a string of 8-inch casing to set to shut out water.

GULF COAST

HOUSTON, Tex., July 5.—Yount Lee Oil Co.'s No. McFaddin in the deep sand area at Spindletop is flowing 3,000 bbls. at 4,975 feet. The Oil and Gas division of the State Railroad Commission estimates the gross production of the deep sands at 11,500,000 bbls. for the first half of 1927.

EAST TEXAS

HOUSTON, Tex., July 5.—The Humble Oil & Refining Co.'s No. 1 Elliott & Clark, the discovery well in Cherokee County, which came in last April, is again flowing salt water. The well has been alternating between oil and salt water and sometimes both. It will now be tried on the pump.

The same company's No. 2 Earle & Ragsdale, 800 feet north of the discovery well, swabbed mud, water and hot saline fluid at 4,320 feet. It is 140 feet deeper than the discovery well. A core was sent to Houston for examination and it looked so good casing was ordered set and a test made. It will probably be drilled deeper, according to the production officials.

The Humble Oil & Refining Co.'s No. 1 Camp Hill, 7 miles southeast of Palestine, is drilling around 800 feet. Cosden's tests on the Keechi Dome, 7 miles northwest of Palestine, are drilling below 2,565 feet.

Sanders and Steele are drilling on the Carlos Dome in Grimes County at 1,918 feet.

Fritz Fuchs, on whose land oil was first discovered in the Thrall Field, has started No. 1 Rummell Brothers, 7 miles northeast of Taylor, Williamson County.

NORTH AND WEST TEXAS

FORT WORTH, Tex., July 5.—Mid-Kansas and Transcontinental's No. 2 Yates-B, north extension Yates Pool, Pecos County, is flowing 67 bbls. hourly through half-inch choke. Top of the pay is 1,207 feet and the well started flowing steadily at 1,337 feet. Total depth 1,348 feet. W. R. Shankel's No. 1 Yates, Lot 4, Section 58, southeast of the Pool, has 1,500,000 feet gas at 1,240 feet and is fishing tools at 1,313 feet with 40 feet oil in hole.

In Fisher County, Marland and Vacuum's No. 1 Lagow, Section 3, Block 22, had hole full salt water 3,125 feet and is drilling at 3,140 feet.

Drilling crew of Roxana Petroleum Corp.'s deep wildcat in Logan County, Oklahoma. Left to right: S. W. Gibson, Teller Boy (he was designated to tell all visitors how it was done); E. L. Miller, tool dresser; B. L. Miller, helper; and John Marshall, driller.

Roxana Petroleum Corp.'s No. 1 McCully, Section 30-19-4w, Logan County, Oklahoma, the deepest big producer in Mid-Continent area. At 5,989 feet this well flowed about 3,000 bbls. of oil and 20,000,000 feet of gas.

J. S. Cosden, F. E. Rose and J. A. Hoover sold their 52-acre lease west of Albany in Shackelford County with 120 bbls. production and three wells to Wentz Oil Corp. The consideration is not known. Cosden's three wells in Ector County are making about 200 bbls. No. 1 increased from 20 bbls. to 90 bbls. when No. 2 was shot. No. 2 making 105 bbls. and No. 3 good for 10 bbls.

NEW YATES POOL LINE

The Humble Pipe Line Co. is making survey for an 8-inch line from the Yates Pool in Pecos County, Texas, to Powell in Crockett County, where connection will be made with the line to Kemper Station in Reagan County where the company's main line can be reached. The Humble Oil & Refining Co. is getting ready to build six 64,000-bbl. tanks in the Yates Pool. The Marland Oil Co. will erect nine 80,000-bbl. tanks at McCamey and the Landreth company will put up three 55,000-bbl. tanks in the Church Field.

MEXICO FORFEITS RIGHTS

WASHINGTON, D. C., July 2.—The Mexican Government has declared the rights of the Transcontinental Oil Co., a subsidiary of the Standard Oil Co. of New Jersey, forfeited because the company has refused to comply with the disputed provisions of the Mexican oil laws. The company has reported this action of the Calles administration to the State Department here.

FORD TO BRING OIL MEN TO THE OIL EXPOSITION

The world trade phase of the International Petroleum Exposition came strongly to the front this week with the announcement of the Ford Motor Co. that it is to be the host in the United States to a group of leading oil men in various countries and that the group will be brought direct from New York to Tulsa for the exposition which will be held September 24-October 1. In the party will be L. Wilson, Standard Oil Co.; C. W. Hamilton, South American Gulf Co.; T. G. Shedd, Caribbean Petroleum Co.; J. A. Whitley, Tago Petroleum Co.; T. A. Berry, Balfour-Williamson Co.; L. E. Bury, Mr. Burns, J. Shaw and V. C. Kitchen of the Imperial Oil Co., Ltd., Toronto. While here these gentlemen are to attend the oil group meetings, the annual dinner of the Mid-Continent Oil & Gas Association and other affairs in connection with the exposition.

The first complete meeting of the exposition committee on scientific and technical exhibits was called for July 7. The members outside the city accepted appointments and said they would attend. Alf. G. Heggem heads the committee, with Dr. Charles N. Gould, director of the Oklahoma Geological Survey, as vice chairman.

Governor Ben S. Paulen, of Kansas, accepted the invitation to attend the annual dinner of the Mid-Continent Oil and Gas Association. Nine governors have been invited.

Applications are pending with the rate bureaus for special travel rates for the exposition. Special train arrangements are under way. An interconnecting railway track is to be run to the exposition grounds.

The exposition office announces several new exhibitors this week. Among them are Oil Conservation Engineering Co., Cleveland; Stough Tank Erecting Co., Tulsa; Westcott & Gries, supplies, Seneca Falls, N. Y.; Taylor Instrument Co., Rochester, N. Y.; National Brake & Electric Co., Milwaukee, Barnsdall Corp., New York; Power Mfg. Co., Marion, Ohio; Powell Mfg. Co., Cincinnati.

FRED STAHLER

Superintendent over wildcat operations for Roxana Petroleum Corp. for ten years with record of never having plugged a hole—a remarkable record in oil business.

Panhandle Wildcats Attract Attention

Northwest Trend to Field Indicated by Data Procured in Test. Production Decreasing but Shipments Greater

By James H. Dameron
Staff Correspondent, Texas Panhandle Fields

AMARILLO, Tex., July 2.—The drilling into of 2 feet of salt water sand carrying a small amount of brine at A. E. Morton & Co.'s wildcat producer in Moore County, and the developments at half a dozen other Panhandle wildcats held the most interest for operators in that territory during the past week. Panhandle production continues to decline, but the shipments of crude out of the field are estimated to be increasing sharply. However, if developments in the McIlroy Pool approach the anticipations of several operators the field's production will be materially bolstered. Two wells in that pool are nearing completion and both are checking high and are in the gusher area.

At the Morton & Co.'s No. 1 Reeder, SW NW NE Section 191, Block 3-T, T. & N. O. Survey, the salt water did not ruin the well and gave valuable geological information for the future tests in that territory. The well made 168 bbls. during the 24 hours before the salt water sand was drilled into at 3,422½-24½ feet, and 160 bbls. the next 24 hours.

Discovery of the oil at No. 1 Reeder indicates a northwest trend of the Panhandle Field. Water was found approximately 60 feet above sea level. Geologists say that logs of wells in northwestern Hutchins County and in the general trend of the field into Moore County indicate the water level is rising with the trend to the northwest, and they now have information as to where to expect to encounter water in future tests to be drilled around No. 1 Reeder.

Into Prominence Recently

Morton & Co.'s well came into prominence several weeks ago when a show of gas was found at 3,325 feet and an oil show was drilled into at 3,335 feet in hard lime. In sandy lime at 3,373-75 feet, 1,200 feet of 32.8 gravity oil rose in the hole, and at 3,379 feet the well made 84 bbls. the first 24 hours. It was deepened to 3,391 feet and the oil and gas production was increased slightly. At 3,382-84 feet the bit went through a shale break and drilled on down to 3,421 feet with another increase in oil and gas, then at 3,422½-24½ feet the bit went into lime and blue shale carrying salt water. The bailer was run seven times and came up full of salt water each trip. The hole is being cleaned and will be plugged back to cut off the water. It is reported the operator plans to shoot the producing formation if the water is successfully cut off.

Speculation continues as to the value of the find in Engleking Drilling Co.'s No. 1 Mullican, C Section 21, Block B, R. M. Thompson Survey, Hale County. The well is variously estimated to be a potential producer of anywhere from 2 to 15 bbls. daily from 407-12 feet. However, most production men estimate the well to be a 2 or 3-bbl. well.

Latest of the developments in that area is the announcement that Ed Hofstra, Amarillo, had purchased 800 acres of the 1,188-acre block on which the well was drilled. He paid $50,000 cash for the well and the acreage. However, he agreed to pay "additional consideration" over a period of four years which would bring the total consideration in the deal to approximately $450,000. In the deal, and in addition to acreage and well, Hofstra acquired some drilling equipment and two oil wells and two gas wells on 188-acre lease in Callahan County. Oil production on the lease in Callahan County is found at around 300 feet.

The property will be operated by the L. L. Donnell Petroleum Co., of which Hofstra is president. It is planned to drill 40 wells on the Mullican land at the rate of 10 wells per year. Hofstra bought 470 acres in Section 22, Block B; 320 acres in the south half of Section 25 and 67 acres in Section 21. He announced plans of cleaning out No. 1 Mullican and running tubing in the well. The first offset will be No. 2, which is some 600 feet north and 300 feet west of No. 1 and in Section 25. Another well will be drilled with a spudder near Tulia in Swisher County.

If production can be brought up to 100 bbls. daily, Hofstra said the operating company intends to build a skimming plant near Hale Center, which is close to the well. Early in the week Tex Thornton, Panhandle well shooter, announced he had agreed to buy the Engleking properties, but later announced his withdrawal from negotiations.

Test Reaches Granite

Geologists made a trip to the well and the surrounding country during the latter part of the week to study surface conditions. But because of the extensive sand dunes for miles around the well the trip was fruitless. In their opinion the best way to geologize that area would be with torsion balance machines and with seismographs.

One of the most important developments in the proven field during the week was the finding in Phillips Petroleum Co.'s No. 12 Elva Whittenburg, E. Tomlison Survey, Hutchinson County. The test was to be a 4,000-foot test in search of lower producing horizons. At 3,750 feet the bit was in one foot of granite and was shut down.

Deep Rock Oil Co.'s No. 1 Lyman & Balfour, Section 9, Block 2, Hartley County, created an interest in that area when it got 3,000,000 feet of gas at 3,160 feet. The well had a rainbow showing at 2,560 feet, and the lime was topped at 2,810 feet. The gas showing is to be thoroughly tested.

W. G. Burton's No. 1 Stickler, Section 579, Block 43, Ochretree County, which was reported to have a show at 3,821 feet, proved disappointing. Casing was set and the hole drilled to 3,870 feet and salt water was bailed.

Vitek Oil Co.'s No. 1 C. R. Garner, SW cor. of Section 113, Block 4, I. & G. N. Survey, Carson County, was being watched with great interest at the end of the week. The well was shot with 40 quarts at 2,968-80 feet, and with 100 quarts at 3,020-68 feet. Following the last shot the well flowed 168 bbls. the first three and one-half hours and then bridged. It is now spraying 50 bbls. a day through the bridge. A show of water was encountered at 3,072 feet.

One of the most important dry hole completions of the week was Gulf Production Co.'s No. 1 Clements, SW cor. Section 27, Block M-10-A, Cealy & Morris Survey, Castro County. The well was ordered abandoned in hard gypsum at 4,600 feet.

R. R. Osborne, Amarillo geologist and producer, sold a 580-acre lease in Carson County with a 51,000,000-foot gas well on it to the Gibson Oil Co. for a reported price of $50,000. The lease covered the SE of Section 65, NW of Section 45, NE and NW of Section 44, N half NW of Section 46 and the S half NE of Section 46, all in Block 4, I. & G. N. Survey.

The well is in the SE cor. of Section 65. Gibson Oil Co. supplies gas to White Deer, as well as supplying gas for fuel on many field operations. Through the deal the purchasing company will supply gas to Roxana and Skelly.

Panhandle Production

Panhandle's daily average production declined 1,840 bbls. during the week to 119,040 bbls. daily. Carson and Moore Counties were the only counties showing gains. In the latter county A. D. Morton & Co.'s wildcat well near Dumas had a daily average of 105 bbls. With the exception of Carson County production the decline was general throughout the field. New production was around its usual amount but several old wells in the field were taken off production because their production had declined to a point where they were not commercial wells. Production by counties is as follows:

Carson	10,945
Gray	9,780
Hutchinson	96,260
Moore	105
Potter	30
Wheeler	1,920
Total	119,040
Total last week	120,880
Loss	1,840

Expect Gain in Output

Production is expected to be increased sharply with the completion of two wells in the McIlroy Pool in southeastern Hutchinson County. Fishing is delaying completion of one well and mudding off 70,000,000 feet of gas above the producing horizon is delaying completion of the other well. The Panhandle's largest well was drilled in the McIlroy Pool and is now more than two months old and is making better than 10,000 bbls. daily. However, subsequent completions in the pool have been small wells except in a few instances, and none have approached the record of the gusher well. The present production of the pool is better than 12,000 bbls. daily.

Estimates of the movement of Panhandle crude from the field show it to be on the increase. According to the estimates, the pipe lines are sending more than 60,000 bbls. daily to the Gulf Coast. Around 35,000 bbls. are being shipped from the field daily in tank cars, and approximately 10,000 bbls. daily are being run to still by Panhandle refineries. The remainder is going to steel storage in the field.

Rapid progress is being made by the West Texas Gas Co. in laying its 217-mile gas line into the South Plains, which is due south of the Panhandle. With less than a week of actual construction work reported, there has been 4 miles of 15-inch pipe laid, 7 miles of 10-inch, 6 miles of 8-inch and 6 miles of 6-inch welded.

The line runs from near Dial in northeastern Carson County, south to Lubbock and Slaton. About 70 miles of pipe is strung and more than 30 miles of the line is ditched. The line will be completed by November 1. Rapid progress is also being made on the Empire Gas & Fuel Co.'s Panhandle-Kansas City line.

Carson County

Osborne and associates' No. 1 Percival, Section 3, Block 199, I. & G. N. Survey, made 432 bbls. the first 24 hours and 185 bbls. the second 24 hours from 3,170 to 3,266 feet. J. T. Parks' No. 2 Noel, Section 3, Block 198, I. & G. N. Survey, is a 25-bbl. well at 3,290 feet. Prairie Oil & Gas Co.'s No. 1 Bryan, Section 4, Block 107, I. & G. N. Survey, was completed as a 10,000,000-foot gas well after being plugged back from 3,302 feet to 3,179 feet. Roxana Petroleum Corp.'s No. 3 Jordan & Brown, Section 4, Block 106, I. & G. N. Survey, was shot with 140 quarts at 3,095 to 3,136 feet and made 524 bbls. The well was good for 154 bbls. before the shot. Same company's No. 4 Jordan & Brown, same lease, was shot with 200 quarts at 3,125-76 feet and completed as a 272-bbl. well. The well was good for 170 bbls. before the shot. The Texas Company's No. 10 S. B. Burnett, Section 100, Block 4, I. & G. N. Survey, is a 245-bbl. well at 3,027 feet.

Castro County

Gulf Production Co.'s No. 1 Clements, SW cor. Section 27, Block M-10-A, Sealy

(Continued on Page 88)

WILDCAT OPERATIONS IN PANHANDLE

Week Ending June 25, 1927

Company, Well, Farm Name, Section and Block—	Remarks—
ARMSTRONG COUNTY	
Meadows et al's No. 1 E. D. Harrell, C Sec. 100, Blk. A-6, A. & G. Sur.	Rig.
United Oil & Trust Co.'s No. 1 J. P. Reck, Sec. 162, Blk. 4, H. & G. N. Sur.	Spudded and temp. abd. at 298 ft.
BRISCOE COUNTY	
C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW, Sec. 22, Blk. B-3, B. S. & F. Sur.	Fish., 1,600 ft.
CARSON COUNTY	
Amatex Dev. Co.'s No. 1 E. S. Polling, Sec. 32, Blk. 2-Y.	Temp. abd., 1,980 ft.
W. A. Gamble's No. 1-A John Dies, 30 ft N of cen., Lot 7, Blk. 11, Panhandle Townsite, Sec. 69, Blk. 3, T. T. R. R. Sur.	Bailing hole, 1,200 ft.
Marland Oil Co.'s No. 1 Burnett-J, C NE NE Sec. 121, Blk. 5	Drlg., 3,165 ft; small spray oil 3,073-3,130 ft; salt water, 3,140-45 ft; dry granite wash, 3,245-88 ft; drlg., 3,487, hard black lime.
Marston Oil Co.'s No. 1 J. L. Noel	Pulling 6-in., 3,064 ft.
Navajo Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y.	Standardizing, 2,150 ft.
Stubblefield et al's No. 1 E. Cooper, SW cor. NE Sec. 5, Blk. 9, I. & G. N. Sur.	Set 8-in. pipe, 1,400 ft; drlg., 1,495 ft.
Vitek Oil Co.'s No. 1 J. H. Eller, NE cor. NW Sec. 200, Blk. 3	Rigging up on new location.
Vitek Oil Co.'s No. 1 C. R. Garner, SW cor. Sec. 113, Blk. 4, I. & G. N. Sur.	Shot 40 qts., 2,968-80; 110 qts., 3,020-68 ft; flowed 188 bbls. first 3½ hrs., bridged, now spraying 50 bbls. per day; show water, 3,072; abd. 4,600 ft. in gypsum.
CASTRO COUNTY	
Colorado O. & R. Co.'s No. 1 M. Siemons, SW cor. Sec. 78, Blk. M-17, B. S. & F. Sur.	Rig blown down.
Gulf Prod. Co.'s No. 1 Clements, SW cor. Sec. 27, Blk. M-10-A, Sealy & Morris Sur.	Top lime, 3,445 ft; set 6-in., 3,925 ft; drlg. red sandy lime, 4,178 ft.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE Sec. 333, Blk. M-6, S. K. & K. Sur.	S.D., 510 ft. for casing.
CHILDRESS COUNTY	
Brookins et al's No. 1 Mrs. Givens, 600 ft N and W of SE cor. Sec. 676, W. & M. W. Sur.	Spudded and S.D.
Hoover & Calloway's No. 1 O. L. Tucker, Sec. 756, Haggard Sur.	Spudded and S.D.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	S.D., 3,000 ft.
COLLINGSWORTH COUNTY	
Harmon & Deems' No. 1 Wilson (Scott), Sec. 44, Blk. 21.	Loc.; temporarily abd.
Wischkamper's No. 1 fee, C SE Sec. 92, Blk. 16	100 ft. salt water in hole from 2,623., S.L.M.

(Continued on Page 131)

(DUNN TOOLAGRAM)

DUNN SUPER SAFETY ELEVATORS

Double Door "Flyer" Type

DUNN ROTARY FLYER
OIL WELL DUNN TOOLS
In partly open position. Note how center member rises and falls with the opening and closing of doors.
DUNN "Rotary Flyer" Elevators and Tongs were used in drilling to completion the deepest well ever drilled. Hundreds of them are in use throughout the world, handling the longest strings of drill pipe, casing and tubing.
In fully open position. The doors are semi-locked when in this position.
Front view closed and locked on pipe. Elevator cannot be opened until relieved of load
Rear view, in closed position and locked. When not under load, elevator is easily opened with cat line
DUNN SUPER-SAFETY

There Is Absolutely No Strain on the Latch

This is a top view of the Dunn Super-Safety "Flyer" Type (Double-Door) Elevator. Note the position of the two hinge pins in direct parallel, both horizontally and vertically, with the links and the load. Absolutely no spreading strains are possible. When under load the weight of the string forces the two doors against the pipe *relieving the latch of all strain.*

The doors are geared together and the center section, or body, gears the elevator to the pipe.

It is impossible for this elevator to open, or be opened, under any circumstances, while the elevator is carrying the load, but when relieved of the load it can be opened and closed easily and quickly with a single movement of one hand, as the latch and handle are combined.

Note the position of the latch-handle, which makes it easy for the operator to *open the elevator with a catline, if desired, when not under load.*

Compare this exclusive Dunn creation with the antiquated so-called "split type" elevator, designed with but one hinge pin, which, together with the latch is under a terrific leverage strain in addition to the normal load.

We solicit an opportunity to demonstrate to any responsible user, that the Dunn Super-Safety "Flyer Type" (Double-Door) Elevators are the fastest, safest and strongest made. Write us for our liberal trial offer.

Supplied in all casing, tubing and drill pipe sizes.

DUNN MANUFACTURING COMPANY

Mid-Continent Branch Warehouse
215 East Archer St.
Tulsa, Okla.

Office and Works
Oxnard, California

Export Sales Office
150 Broadway,
New York City

I. T. I. Well Is Largest in Seminole

Produces 13,451 Bbls. in 24 Hours After Deepening. Near-by Drilling Will Be Curtailed by Agreement

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

With the Indian Territory Illuminating Oil Co.'s well in Section 1-7-6 flowing 611 bbls. an hour and with a total production of 431,250 bbls. for the field for the 24 hours ending Saturday morning at 7 a. m. the Greater Seminole Field went through another record-breaking week.

The I. T. I. well in Section 1-7-6 on its performance on Friday and Saturday showed itself to be one of the biggest wells ever brought in in Oklahoma. It made 13,451 bbls. for the 24 hours ending Saturday at 7 a. m. and was producing more at the end than at the beginning because Saturday morning it was flowing at the rate of 14,664 bbls. a day. The well had been drilled deeper and the sand record stood at 4,197-4,208 feet. It is the largest well in the field and it is significant that the well closest to it in production, in Section 3-9-5, Earlsboro Pool, is owned by the Empire Gas & Fuel Co., which owns a majority interest in the Indian Territory Illuminating Oil Co. The Empire company's well was an 11,000-bbl. initial producer.

Wells in the Garber deep sand showed more production than the I. T. I. gusher, but very few other Oklahoma wells have gauged as much oil as this new sensation in the southern part of Seminole County.

Curtailment Agreement

Because of an agreement among companies owning acreage near the I. T. I. well only 11 locations have been made around it. There might have been a hundred wells drilling near this well had there been no Seminole drilling regulations and no umpire to take care of the situation. This phase of the situation is treated in another story in this edition and it is of the utmost importance to the trade in general a part of which appears to have lost sight of the facts concerning the Seminole curtailment movement and have made themselves believe that little or nothing was being done to limit production of that field. It will be recalled that the only reason the I. T. I. well was drilled in was because the lease was about to expire which made completion a necessity if the property was not to be sacrificed.

376 Wells Drilling

There were 565 wells producing and 376 drilling in the general Seminole area at the close of the week. Of these 175 were below 3,700 feet; 107 between 3,100 and 3,700 feet; 62 between 2,000 and 3,099 feet and 32 less than 2,000 feet. In addition there were 79 rigs up and 25 locations staked out. These wells are all in Townships 10-6, 9-6, 8-6 and 9-5.

The Barnsdall Oil Co.'s No. 2 Peter, C SE SE SW Section 10-9-5, got the Wilcox sand at 4,268 feet and at 4,281 feet flowed 175 bbls. per hour.

The Barnsdall Oil Co.'s No. 11 Haun, NE cor. Section 15-9-5, an old Earlsboro sand well drilled deeper, got the Wilcox sand at 4,311 feet. At a total depth of 4,316 feet the hole filled with water.

Barnsdall Oil Co.'s No. 1 Murrow, SW cor. Section 11-8-6, swabbed 600 bbls. from the Wilcox sand topped at 4,090 feet, total depth 4,213 feet. There was 100 feet of water at the bottom.

Barnsdall Oil Co.'s No. 1 Walsutke, NE cor. SW Section 12-9-5, was making 200 bbls. an hour from the Wilcox sand at 4,331-37 feet.

Mid-Continent Petroleum Corp.'s No. 2 Baker, C SW SW SE Section 10-8-6, was flowing 3,160 bbls. a day on air from the Wilcox sand at 4,053-65 feet.

The Conservation Oil Co.'s No. 1 McCulley, SW cor. SE Section 21-5-6, Pontotoc County, was opened Wednesday evening, June 29, and flowed 1,200 bbls. in less than eight hours and thereafter flowed 235 bbls. an hour. The well had not been deepened. The 8-inch casing (perforated) was set on bottom. There was no water showing but there was still a trace of b.s. Later, however, the water and sediment showed again and on Friday a test made indicated 10 per cent water and 22 per cent b.s. On Friday the well was pinched down to 1,300 bbls. a day.

In the Seminole area the Philmac Oil Co. and McCulloch Oil Cos.' No. 3 Butler, NE cor. SE NE Section 35-9-6, swabbed 425 bbls. a day from sand at 4,100-29 feet.

The Prairie Oil & Gas Co.'s No. 3 Stidham, SW cor. SE NE Section 11-9-5, which got the Wilcox sand at 4,283 feet, drilled to 4,302 feet and produced 275 bbls. an hour.

Barnsdall Oil Corp.'s No. 2 Peter, C SW SE SW Section 10-9-5, got Wilcox sand at 4,268 feet and at 4,276 feet flowed 225 bbls. in four and one-half hours.

The Texas Company's No. 4 Reed, C NE SW NE Section 14-8-6, swabbed 201 bbls. from the Wilcox sand at 4,176-4,206 feet.

The Minnehoma Oil Co.'s No. 4 Bowlegs, SW cor. Section 16-8-6, flowed 200 bbls. a day from the top of the Hunton lime at 4,219 feet.

The Devonian Oil Co. and Independent Oil & Gas Co. have a 30,000,000-foot gas well in No. 2 Bigpond, NE cor. SW NE Section 36-15-7, Creek County, from the Dutcher sand at 3,235-44 feet.

SEMINOLE PRODUCTION
For 24 Hours Ending Friday at 7 a. m.

Company and Farm—	Wells	Prod.
Bowlegs		
Amerada—Rasco	8	12,304
Atlantic—Baker	2	3,688
Fleet	2	812
Grayson	1	3,412
Jones	2	.....
Barnsdall—McNac	1	105
Murrow	1	265
Carter—Bowlegs	2	4,405
Harjoche	4	3,690
Hilly	1	2,099
McGeisey	1	.....
Walker	2	2,440
Wise	4	8,919
Empire—Lacy	4	6,387
Gypsy—Brown	1	90
Walker	6	4,392
Independent-Marland—Coker	1	1,150
Ind.-Terr. Ill. Co.—Billington	1	2,227
Davis	3	3,675
Fay	1	291
Goforth	9	11,092
Livingston	8	13,311
Walker	8	11,418
Wilmont	4	5,121
Wolf	1	1,544
Youngblood	3	2,163
House	1	10,695
McColloch—Bowlegs	1	1,171
Mid-Continent—Baker	3	5,610
Hutke	1	465
Minnehoma—Bowlegs	4	3,772
Prairie—Gahagan	2	2,576
Harber	4	5,090
Whitney	2	1,200
Pure—Reed	13	26,432
Roxana—Taylor	4	4,940
Shaffer—Lacy	2	2,121
Sinclair—Adam	1	25
Bowlegs	1	15
Ellen	1	1,995
Harjo	3	2,165
Jones	1	2,930
Taylor	1	2,490
Walker	2	4,730
The Texas Company—Reed	3	5,360
Tidal—Harjoche	1	1,465
Total	132	190,272
Earlsboro		
Amerada—Anderson	4	5,612
Cowden	1	4,212
Barnsdall—Davis, D.	1	1,151
Davis, M.	1	.....
Gibson	1	2,856
Peter	2	2,370
Sebolka	1	3,101
Smith	1	349
Wasutke	1	4,370
Carter—Payne	1	6,700
Crosbie—Bryant	1	2,670
Empire—Edmundson	1	9,317
Gypsy—Bora	1	.....
Earl	1	.....
McFarland	2	55
Peter	2	993
State	4	4,708
Strain	1	.....
Noble	1	5,915
Independent—Knapp	1	1,703
Sullivan	1	1,198
Inter-Ocean—Payne	1	504
Magnolia—Bryant	2	4,679
Holmsley	1	4,896
Lena	1	2,565
Simpson	1	3,677
Sparks	2	5,143
Mid-Continent—McCumber	2	3,765
Phillips—Graham	4	3,020
Philmac—Dobbs	2	75
Prairie—Baker	1	50
Davis	1	1,460
Stidham	3	12,195
Sinclair—Foreman	1	.....
Shallow production	31	.....
Total	83	104,199
Seminole		
Carter—B. Carter	4	240
J. Carter	4	75
F. Carter	3	240
R. Cudjo	4	1,750
W. Cudjo	1	325
Gilliland	1	470
Grisso, W.	8	1,390
Knapp	3	1,312
Killing, M.	10	12,690
Killing, G.	4	1,580
Lukes	6	3,300
Simpson	2	200
Strother	3	4,285
Vierson	4	905
Amerada—Fixico	4	1,622
Killing	4	571
Rentie	4	1,343
Atlantic—Cudjo, N.	4	785
Cudjo, J.	2	.....
Barnsdall—Carter	9	3,953
Jones	4	1,895
Henry	1	76
Empire—Gross	2	2,082
Wilson	3	830
Gypsy—Butler	3	1,039
Carter	8	657
Cudjo	3	1,817
Fixico	5	165
Harjo	3	1,320
Wolf	7	915
Independent—P. Fixico	4	290
Harjo	2	40
Independent, Garland and Interocean—T. Fixico	8	955
Jones	4	924
Ind. Terr. Ill Co.—Bowlegs	10	3,545
Gooden	4	438
Harjo	4	602
James	4	1,008
Marcey	1	.....
Reed	2	43
Kingwood—Johnson	5	2,208
Magnolia—Franks	3	1,304
Mid-Continent—Rentie	9	1,560
Tayeche	7	550
Mid-Kansas—Pressley	1	94
Johnson	1	725
Phillips—Strothers	3	722
Philmack—Butler	5	4,970
Prairie—Gross	5	80
Mason	1	1,430
Spencer	1	15
Strother	8	2,290
Pure—Strother, A.	17	2,916
Strother, B.	3	4,523
Roxana—Harber	2	504
Lashley	2	116
Sinclair—Carter	2	35
Cudjo, A.	6	1,330
Cudjo, B.	3	1,095
Dicey	1	595
Fixico	4	680
Slick—Born	1	.....
Cudjo	3	1,774
Franks	8	688
Giblet	1	1,748
Superior—Cudjo	4	1,976
Texas—Mayhue	1	236
Tidal—Carter	5	2,310
Fixico	8	1,330
Harjo, D.	1	1,785
Harjo, T.	7	240
Mahardy	5	1,000
Tayeche	2	1,730
Turman—Cudjo	4	850
Grisso	1	467
Jones	4	2,148
Total	307	101,638
Searight		
Carter—Davis	5	7,190
Frazier	4	6,765
Kiker	1	35
Scott	1	40
Stewart	1	.....
Gypsy—Cudjo	1	557
Mid-Continent—Grayson	6	3,895
Soloche	2	585
Prairie—Cannon	1	.....
Garber	1	15
Houck	1	10
Kincaid	8	3,520
Wiemer	1	20
Pure—Aldridge	2	1,900
Roxana—Strother	1	3,217
Searight—Youngblood	2	.....
Sinclair—Polly	2	2,455
Twin State—Cudjo	1	1,245
Wilcox—Chupco	2	2,576
Total	43	34,025
Grand total	565	430,134

Pottawatomie County

Mid-Continent Petroleum Corp. made location for No. 6 McKinley, SE cor. NW SW Section 9-9-5, Earlsboro Pool. The rig has been moved out for No. 7 McKinley, SW cor. NE SW Section 9-9-5. Magnolia Petroleum Co. made location for No. 1 Davis, SE cor. NE NE Section 15-7-4, Pearson Pool.

Barnsdall Oil Co.'s No. 1 Gibson, SW cor. NE Section 9-9-5, made 3,147 bbls. from the Wilcox sand at 4,310-16 feet. Phillips Petroleum Co.'s No. 2 Gram, SW cor. SE Section 9-9-5, has been abandoned at 4,433 feet in the Wilcox sand. Gypsy Oil Co.'s No. 1 Boro, NW cor. SE Section 16-9-5, topped the Wilcox sand at 4,300 feet, drilled to 4,366 feet and was abandoned. No. 4 Earl, SW cor. NW Section 16-9-5, had the Hunton lime at 4,444-55 feet and was abandoned at this depth. Independent Oil & Gas Co. and Devonian Oil Co.'s No. 1 Day, NE cor. NW Section 21-9-5, is dry and abandoned in the Wilcox sand at 4,513-44 feet. Magnolia Petroleum Co.'s No. 1 Clour, NE cor. NW SE Section 11-7-4, Pearson Pool, is swabbing 50 bbls. from the Hunton lime at 3,705-77 feet. No. 1 Billington, NE cor. NW NE Section 22-7-4, has been completed in the Hunton lime at 3,648-60 feet making 21,600,000 feet of gas.

Seminole County

Barnsdall Oil Co. made location for No. 4 Sango, NW cor. SW NW Section 1-9-5, Earlsboro Pool. Shaffer Oil & Refining Co. has the rig on the ground for No. 1 Clark, SW cor. SE SW Section 1-9-5. Amerada Petroleum Corp. has moved a rig out for No. 1 Roger, SW cor. SE SE Section 3-9-5. The rig is also on the ground for No. 2 Roger, SE cor. Section 3-9-5. Empire Gas & Fuel Co. has the rig on the ground for No. 5 Edmundson, NE cor. SE SW Section 3-9-5. Barnsdall Oil Co. has the rig on the ground for No. 1 Bruner, NW cor. NE NE Section 10-9-5. Location was made for No. 2 Bruner, SW cor. NE NE Section 10-9-5. No. 1 S. Pack, NE cor. SE SE Section 10-9-5, is drilling deeper at 3,570 feet. Independent Oil & Gas Co.'s No. 2 Bruner, SE cor. SW NE Section 10-9-5, is rigging up to deepen. Cable tools are being rigged up to deepen No. 4 Sullivan, SE cor. NE Section 10-9-5. Magnolia Petroleum Co.'s No. 1 Simpson, NE cor. NW SE Section 10-9-5, is preparing to deepen to the Wilcox sand.

The Texas Company has the rig on the ground for No. 4 Brown, NE cor. SW NW Section 10-9-5. Rigs have also been moved out for No. 5 Brown, NW cor. SE NW, and No. 6 Brown, NE cor. SE NW Section 10-9-5. No. 1 Wilmot, NW cor. NE SE Section 10-9-5, is to be deepened to the Wilcox. Barnsdall Oil Co. has the rig on the ground for No. 3 J. Davis, NW cor. SW NW Section 11-9-5. Gypsy Oil Co. made location for No. 5 B. Carter, SW cor. SE NW Section 11-9-5. Rigs are on the ground for No. 6 B. Carter, SW cor. NW NW Section 11-9-5, and No. 7 B. Carter, NW cor. Section 11-9-5. Independent Oil & Gas Co. made locations in Section 11-9-5 for No. 2 Gaines, NE cor.; No. 3 Gaines, NW cor. and No. 4 Gaines, SW cor. NE NE. Magnolia Petroleum Co. is preparing to deepen No. 1 Sparks, NW cor. SW Section 11-9-5. Sinclair Oil & Gas Co. has the rig on the ground for No. 2 Hollins, SE cor. NE NW Section 12-9-5.

Barnsdall Oil Co. is preparing to deepen No. 1 Hearn, NE cor. Section 15-9-5. Pure Oil Co.'s No. 1 Aldridge, NW cor. SE NW Section 3-9-6, Searight Pool, is being deepened below 4,109 feet. Roxana Petroleum Corp. made location for No. 3 Strothers, NE cor. SW NE Section 3-9-6. Amerada Petroleum Corp. made location for No. 2 Johnson, NW cor. NE SE Section 4-9-6. Carter Oil Co. has the rig on the ground for No. 8 Davis, SW cor. SE NE Section 4-9-6. Independent Oil & Gas Co. made location for No. 4 Harjo, NE cor. SE SW Section 25-9-6, Seminole Pool. Indian Territory Illuminating Oil Co. has moved a rig out for No. 2 Allen, SE cor. SW

The problem of curtailing over-production in the field cannot be separated from the problem of increasing efficiency in the refinery

Conservation of a basic national resource demands that both problems be studied and solved together

The job is only half done if we restrict production without at the same time seeing to it that refineries operate at maximum efficiency by using methods and processes which will produce the greatest possible gasoline returns

And that means Cracking to the limit

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Owner of the Dubbs Process
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NE, Section 25-9-6. Roxana Petroleum Corp. has the rig up for No. 1 Hull, NW cor. NE SE Section 25-9-6. Mid-Continent Petroleum Corp. has made the location for No. 1 Smith, SW cor. Section 12-8-6, Bowlegs Pool. Empire Gas & Fuel Co. made location for No. 9 Lacy, C NW SW Section 14-8-6, to drill for gas. Shaffer Oil & Refining Co.'s No. 4 Lacey, an old well completed at 4,223 feet, SW cor. SE SW Section 14-8-6, is to be deepened. Independent Oil & Gas Co. and Marland Oil Co. moved the rigs out for No. 2 Coker, NW cor. SE NE; No. 3 Coker, SW cor. SE NE, and No. 4 Coker, SE cor. SE NE Section 21-8-6.

Indian Territory Illuminating Oil Co. made location for No. 4 Billington, SE cor. NE NW Section 22-8-6. Location was also made for No. 10 Bowlegs, SW cor. NW SE Section 22-8-6. Midland Oil Co. made locations for No. 3 Wise, SE cor. NW and No. 4 Wise, SW cor. SE NW Section 23-8-6. Mid-Continent Petroleum Corp. made location for No. 1 Wadsworth, SW cor. Section 36-8-6. Tidal Oil Co. is erecting the rig for No. 1 House, NE cor. NW NW Section 1-7-6, in the Little River Pool. Indian Territory Illuminating Oil Co. has the rig on the ground for No. 1 Reed, SE cor. NW NW Section 1-7-6. The location was made for No. 1 Jackson, NW cor. SW NW Section 1-7-6. The rig has been moved to the location for No. 1 House, SW cor. NW NW Section 1-7-6. Amerada Petroleum Corp. has the rig on the ground for No. 1 Nity, NE cor. SE NE Section 2-7-6. Indian Territory Illuminating Oil Co. has the rig on the ground for No. 1 Nity, NE cor. Section 2-7-6.

The Prairie Oil & Gas Co. is building the rig for No. 7 Stidham, NE cor. SE NE Section 11-9-5, Earlsboro Pool. The rig has been moved out for No. 8 Stidham, SE cor. NW NE Section 11-9-5. The rig is also on the ground for No. 9 Stidham, NE cor. NW NE Section 11-9-5. Location was made for No. 3 O. Graham, NE cor. NW NW Section 10-9-5, and for No. 4 O. Graham, SE cor. NW NW Section 10-9-5. Locations were made for No. 2 C. Graham, NW cor. SW SE, and No. 3 C. Graham, SE cor. SW SE Section 3-9-5. Location was made for No. 3 Jones, SE cor. NW SE Section 11-8-6, Bowlegs Pool.

Barnsdall Oil Co. and Mid-Continent Petroleum Corp.'s No. 10 H. Williams, SW cor. NE SW Section 33-11-8, was completed for 200 bbls. in the Wilcox sand at 4,171-4,232 feet. Gypsy Oil Co. and Phillips Petroleum Co.'s No. 1 Tiger, SE cor. Section 34-10-7, has been abandoned at 4,606 feet in the Wilcox sand second break. Mid-Continent Petroleum Corp.'s No. 2 Davis, SE cor. SW Section 33-10-6, was shot with five quarts and produced 1,200 bbls. from the Wilcox sand at 4,328-35 feet.

Carter Oil Co.'s No. 1 Sango, NE cor. SW Section 1-9-5, Earlsboro Pool, is swabbing 190 bbls. from the Earlsboro sand at 3,462-88 feet. Independent Oil & Gas Co.'s No. 3 Sullivan, SW cor. SE NE Section 10-9-5, has been completed for 3,624 bbls. in the Wilcox sand at 4,330-38 feet. Gypsy Oil Co.'s No. 1 Noble, SW cor. NE Section 12-9-5, drilled to the Wilcox sand at 4,365-74 feet and made 3,567 bbls. Amerada Petroleum Corp.'s No. 7 Anderson, NE cor. SW NW Section 15-9-5, had an initial production of 477 bbls. from the Wilcox sand at 4,451-55 feet. The Prairie Oil & Gas Co.'s No. 2 Stidham, SE cor. SW NE Section 11-9-5, made 5,330 bbls. from the Wilcox sand at 4,307-12 feet. Carter Oil Co.'s No. 6 F. Killing, SW cor. SE SW Section 14-9-6, Seminole Pool, made 1,540 bbls. on air from the Wilcox sand at 4,318-44 feet. Roxana Petroleum Corp.'s No. 1 Lasley, NE cor. SE NE Section 22-9-6, made 75 bbls. after a shot of five quarts in the Wilcox sand at 4,287-4,304 feet.

Independent Oil & Gas Co.'s No. 3 Harjo, SW cor. SE SW Section 25-9-6, swabbed 330 bbls. from the Wilcox sand 4,507-12 feet. Tidal Oil Co.'s No. 1 D. Harjo, SW cor. NE SW Section 25-9-6, had the top of the Wilcox sand at 4,220 feet, drilled to 4,233 feet and produced 1,985 bbls. Pure Oil Co.'s No. 15 Strothers, NE cor. SW SW Section 26-9-6, was completed for 70 bbls. in the Wilcox sand at 3,985-4,057 feet. Phillips Petroleum Co.'s No. 3 Strothers, NE cor. SW SE Section 27-9-6, made 112 bbls. from the Wilcox sand at 4,003-27 feet. The Prairie Oil & Gas Co.'s No. 8 Strothers, NE cor. SE Section 27-9-6, produced 100 bbls. from the Wilcox sand at 4,171-4,208 feet. Gypsy Oil Co.'s No. 1 Cudjo, NE cor. SW NE Section 34-9-6, made 232 bbls. from the Wilcox sand at 4,150-4,304 feet. No. 3 Cudjo, NE cor. NW SE Section 34-9-6, made 235 bbls. from the Wilcox sand at 4,135-4,285 feet. Tidal Oil Co.'s No. 1 Harjoche, SE cor. NE SW Section 10-8-6, Bowlegs Pool, flowed 1,565 bbls. from the Wilcox sand at 4,020-24 feet after deepening. Atlantic Oil Producing Co.'s No. 1 Grayson, SW cor. NW Section 13-8-6, had Wilcox sand at 4,213-27 feet and produced 4,315 bbls. Empire Gas & Fuel Co.'s No. 5 Lacey, SE cor. SW SW Section 14-8-6, was shot with 20 quarts in the Wilcox sand at 4,435-49 feet and made 1,364 bbls.

Pure Oil Co.'s No. 3 Reed, SE cor. NW SE Section 14-8-6, made 3,506 bbls. after it was shot in the Wilcox sand at 4,230-61 feet. No. 4 Reed, NE cor. SW SE Section 14-8-6, flowed 1,019 bbls. from the Wilcox sand at 4,240-74 feet. No. 9 Reed, NE cor. SW Section 14-8-6, was completed for 1,591 bbls. in the Wilcox sand at 4,134-53 feet. Indian Territory Illuminating Oil Co.'s No. 12 Goforth, NE cor. SW NE Section 15-8-6, was shot with 20 quarts in the Wilcox sand at 4,185-4,220 feet and made 1,770 bbls. No. 8 Walker, NE cor. SE SE Section 15-8-6, produced 716 bbls. after being shot with 20 quarts in the Wilcox sand at 4,286-4,306 feet. Minnehoma Oil Co.'s No. 1 Bowlegs, NE cor. SW SW Section 15-8-6, had Wilcox sand from 4,217 feet to 4,258 feet and produced 1,080 bbls. Roxana Petroleum Corp.'s No. 3 Taylor, SE cor. NE NE Section 16-8-6, had initial production of 2,020 bbls. from the Wilcox sand at 4,175-4,250 feet. Indian Territory Illuminating Oil Co.'s No. 2 Billington, NE cor. NW Section 22-8-6, topped the Wilcox sand at 4,334 feet, drilled in to 4,351 feet and made 2,604 bbls. after a shot of 20 quarts.

McCullough Oil Co.'s No. 1 Bowlegs, NE cor. NW NW Section 22-8-8, was completed for 1,165 bbls. in the Wilcox sand at 4,345-62 feet. Carter Oil Co.'s No. 1 Hilly, NE cor. SE Section 23-8-6, was deepened and completed in the Wilcox sand at 4,249-60 feet, producing 2,640 bbls. after a shot of 20 quarts. Indian Territory Illuminating Oil Co.'s No. 1 Work, NW cor. SW Section 24-8-6, made 1,818 bbls. after it was shot with 10 quarts in the Wilcox sand at 4,512-15 feet. Barnsdall Oil Co.'s No. 1 McNac, SW cor. SE Section 28-8-6, is a Hunton lime well making 120 bbls. from 4,387-91 feet, the total depth being 4,392 feet. Gypsy Oil Co.'s No. 1 Eunawse, SE cor. Section 32-8-6, a rig, has been abandoned. No. 1 Harjo, SW cor. NW SE Section 33-8-6, was abandoned after drilling to 1,740 feet.

Dixie Oil Co.'s No. 4 M. Walker, NW cor. NE SE Section 29-8-8, Wewoka Pool, was drilled deeper and completed at 3,975 feet in the Hunton lime topped at 3,804 feet, and now pumping 4 bbls.

Wagoner County

Price & Williams' No. 1 Samuels, SW cor. Section 32-17-17, is dry at 1,423 feet. G. S. Wilson and others' No. 2 Watson, NW cor. SE SW NE Section 11-16-16, has been abandoned at 1,740 feet.

Caddo County

Mason and others' No. 1 Jones, C W half NE Section 17-5-14w, has been abandoned at 700 feet.

Carter County

Schermerhorn Oil Co. and Roxana Petroleum Corp.'s No. 2 Williams, SE cor. NE NW Section 11-2s-3w, has the rig up.

Magnolia Petroleum Co.'s No. 6 W. Hardin, NW cor. SW SW Section 19-1s-3w, swabbed 150 bbls. from a series of sands at 2,314-2,838 feet and is now pumping 97 bbls. Humble Oil & Refining Co.'s No. 3 Jennings, NW cor. SW SE Section 28-1s-3w, is dry and abandoned at 3,391 feet. Magnolia Petroleum Co.'s No. 1 Morris, SE cor. NE Section 21-2s-3w, was completed for 135 bbls. in sand at 2,202-06 feet.

Creek County

O. N. White and others' No. 1-A Tiger, NE cor. SW NW Section 14-18-11, an old well deepened, is now drilling at 700 feet. Pontiac Oil Co. and others have the rig on the ground for No. 5 Fulsom, CSL NW SW Section 13-17-10. Ted Ray Oil Co. has moved out a rig for No. 1 Smiles, SW cor. NE SW Section 13-17-10. The same company also has the rigs on the ground for No. 4 Brink, NW cor. SE SW, and No. 5 Brink, CSL SE SW Section 13-17-10. Pioneer Petroleum Co. made locations for No. 1 Self, CNL SW NE Section 21-17-10. Kawfield Oil Co.'s No. 1 Bowers, NE cor. NW SW Section 23-16-10, is spudding. Atlantic Oil Producing Co.'s No. 3 Bear, NW cor. SE NW Section 16-14-10, is spudding. The Prairie Oil & Gas Co. made location for No. 1 Sheppard, NE cor. NE SE Section 35-15-7. Steinberger & Smith have the rig up for No. 1 Smiley, SE cor. NW NE Section 19-19-8.

Devonian Oil Co. and Independent Oil & Gas Co.'s No. 2 Bigpond, NE cor. SW NE Section 36-15-7, has been completed for 30,500,000 feet of gas in sand at 3,235-44 feet. Wells & Christe's No. 2 Unallotted, C NW NW Section 10-18-11, is making 10 bbls. from the Taneha sand at 1,881-96 feet after being shot with 30 quarts. Ted Ray Oil Co.'s No. 3 Brink, SW cor. SE SW Section 13-17-10, is a 600-bbl. well in the Dutcher sand at 2,425-62 feet. Thompson & Black's No. 2 Broadnox, CWL E half SW SW Section 16-17-11, is making 7,000,000 feet of gas from the Taneha sand at 1,876-1,939 feet. Pioneer Petroleum Co.'s No. 2 Lewis, NE cor. SE NW Section 19-17-11, is dry and abandoned at 2,725 feet, having lost the hole at this depth.

Grady County

Meridian Oil & Gas Co.'s No. 3 Farwell "B," NW cor. SW Section 24-5-8w, is rigging up. Gant and others made location for No. 1 Benn, NE cor. SW Section 21-4-6w. Carter Oil Co.'s No. 1 Byrd, SE cor. NE NW Section 8-3-5w, is rigging up rotary tools. Amerada Petroleum Corp. and W. H. Gant's No. 1 Hicks, NW cor. SW SE Section 16-3-5w, Carter-Knox Pool, an old well being deepened, had the top of a sand at 1,724 feet, drilling in sand at 1,745 feet and flowing 350 bbls. Carter Oil Co.'s No. 2 Woods, SW cor. NE NE Section 17-3-5w, which is being deepened, is drilling at 2,408 feet in sand topped at 2,402 feet and flowing 70 bbls. Clark & Cowden's No. 3-A Kerans, SE cor. SW NE Section 21-3-5w, is rigging up rotary tools. Magnolia Petroleum Co.'s No. 4 Harrison, SE cor. NE NE Section 28-3-5w, is being rigged up to deepen from 1,762 feet.

J. B. Nichols' No. 2 Dryden, SW cor. SE Section 35-5-8w, is producing 42,000,000 feet of gas from sand at 2,134-2,404 feet. Watchorn Oil & Gas Co.'s No. 4 Pettitt, C SW SE, Section 11-4-8w, is completed for 60,000,000 feet of gas in sand at 3,350-53 feet. Frates and others' No. 1 Sledge, NE cor. SW Section 6-3-5w, Carter-Knox Pool, has been abandoned at 3,110 feet. Carter Oil Co.'s No. 5 Walford, SW cor. SE Section 16-3-5w, has sand at 1,699-1,714 feet from which it is producing 285 bbls. No. 2 C. Kerans, SE cor. NE Section 21-3-5w, is making 100 bbls. from sand at 1,707-18 feet. The Prairie Oil & Gas Co.'s No. 4 Russell, NE cor. NW Section 21-3-5w, came in for 290 bbls. naturally from sand at 1,667-1,798 feet. Magnolia Petroleum Co.'s No. 6 Harrison, NW cor. NE NE Section 28-3-5w, had 11,000,000 feet of gas in sand at 1,703-15 feet which was bradenheaded and the well drilled to another gas sand at 1,750-95 feet from which it is making 23,000,000 feet of gas.

Kay County

Amerada Petroleum Corp.'s No. 1 White, NW cor. SW Section 22-29-3w, has been abandoned at 4,906 feet. Comar Oil Co.'s No. 1 Dowd, NW cor. SW Section 4-28-1w, had a hole full of water in

(Continued on Page 108)

FIELDS OF KANSAS REPORT NO NEW COMPLETIONS OF INTEREST

By J. L. Dwyer
Staff Correspondent, Kansas Fields

Small completions and dry holes and very little new work started characterized the reports from the various Kansas fields during the week in review.

Barber County

Merriman and others have the rig up for No. 1 Elliott, C NE Section 16-31-12w.

Butler County

Kismet Oil Co. and others have built the rig for No. 1 State Bank, SE cor. Section 3-27-6.

McPherson & Jones' No. 1 Jahrens, NE cor. NW SE Section 31-25-8, is dry and abandoned at 3,190 feet. Pryor & Lockhart's No. 1 Dickinson, NW cor. NE Section 9-26-3, is abandoned at 3,202 feet with a hole full of water. Empire Gas & Fuel Co.'s No. 18 Wallace, SW cor. NE NW, Section 11-28-4, drilled to 2,613 feet and after plugging back to 2,075 feet is producing 10 bbls. after a shot of 60 quarts in sand at 2,067-77 feet. B. G. & M. Oil Co.'s No. 1 Schmidt, SE cor. SW Section 25-29-3, is dry at 3,517 feet.

Chase County

Grener, Fowler and others made location for No. 1 Carson, NE cor. Section 9-21-7. Preston & Pasewalk's No. 5 Lipps, C NE NE, Section 36-18-6, is making 2,000,000 feet of gas from sand at 1,245-52 feet.

Cowley County

T. B. Slick's No. 5 Dibbons, SW cor. NW NE Section 22-32-4, made 25 bbls. after it was shot with 40 quarts in sand at 2,301-79 feet.

Elk County

Elmwood Oil Co. and others' No. 1 Osborn location was made NW cor. SE NE Section 15-30-10.

Ellsworth County

Valerius & Cheney made location for No. 1 Maxiner, C NW Section 9-15-10w.

Geary County

Kirby & Wright's No. 1 Kurtz, SW cor. Section 18-11-5, is a dry hole at 2,652 feet.

Greenwood County

Simmons, Darby Petroleum Co. and others' No. 1 Clopton "B," NE cor. Section 23-22-10, is spudding. Polhamus and others have erected the rig for No. 1 Tucker, NE cor. SE NE, Section 3-26-10.

Theta Oil Co.'s No. 19 Browning, NW cor. SE NW Section 17-22-10, is dry and abandoned at 2,465 feet. Empire Gas & Fuel Co.'s No. 13 Duby, NE cor. NW Section 23-22-11, was completed for 150 bbls. in sand at 1,870-1,905 feet after being shot with 110 quarts. Rhodes and others' No. 2 Broddock, NW cor. Section 23-22-12, is dry and abandoned at 2,332½ feet. York State Oil Co.'s No. 2 Patterson, NE cor. SW NW Section 36-23-11, was shot with 40 quarts and abandoned at 1,885 feet. Stark and others' No. 1 Fletcher, SW cor. NE Section 24-23-12, is a dry hole at 1,740 feet. Ferrell and others' No. 1 Keller, SW cor. NE Section 31-25-10, has been abandoned at 2,170 feet.

Lyon County

Sheedy and others' No. 2 Jones, NE cor. NW SE Section 19-21-10, is spudding.

Russell County

Wilcox Oil & Gas Co.'s No. 1 Beller, SW cor. SE Section 16-12-15w, is dry and abandoned at 3,336 feet.

Sumner County

Noble and others made location for No. 1 Oxford Townsite, C Lot 15, Block 33, Section 11-32-2e.

Wabaunsee County

Empire Gas & Fuel Co. made location for No. 1 Schwalm, SE cor. Section 19-12-11.

Woodson County

Peerless Oil & Refining Co.'s No. 1 Henley, NE cor. SE NE Section 27-26-14, is dry and abandoned at 900 feet.

SERIES 150

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Pine Island Trinity Horizon Gusher

Came in Flowing at Rate of More Than 12,000 Bbls. of 44 Gravity Oil from 3,685 Feet. Had Passed Up the Gas

By Nell Williams
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 4.—A gusher pay in the Trinity horizon of the Pine Island district of the Caddo Field was tapped Sunday morning when Haynes Brothers' No. 1 Murray, Section 14-21-15, came in flowing at the rate of more than 12,000 bbls. of 44 gravity oil daily from the 3,685-foot horizon.

Other wells in the field have been big gas producers with a small production of oil but few had been drilled as deep into the sand as the Haynes Brothers well which passed up the gas in hopes of hitting the long-expected big pay.

Blowout in Greenwood

A sensational blowout from the Nacatoch sand at a shallow level in the north Greenwood district, just east of Shreveport, two additional gas wells, one of which is making some oil, in the wildcat Carterville Field of Bossier Parish, a small wildcat gasser in LaSalle Parish, and a 150-bbl. producer in the Irma Field of Nevada County, Arkansas, featured the oil news in the North Louisiana-Arkansas division the past week.

This and three rank wildcats in sands showing oil, the holding up of clean oil production in a Union County, Arkansas, rank wildcat well, and the possibility of opening up of a new gas field on an island salt dome in Winn Parish, Louisiana, are holding the interest of all operators in this district.

The biggest news was the blowout in B. A. Hardy's No. 1 Hammock, Section 27-18-16, in the north Greenwood district, northeast of the main Waskom Field. This well experienced two blowouts within a week. After the first was brought under control and the well completed, making 36,000,000 feet of gas daily, the second occurred, ripping the control head and the connections off.

The well was brought under control the second time late Friday after blowing wild for two days. Gauged by the Louisiana Department of Conservation it showed 62,500,000 feet of gas but as there is some salt water it is estimated that the gas flow is approximately 50,000,000 feet daily.

This is one of the largest gas wells ever brought in in the Waskom or Greenwood districts and is the biggest well ever completed in the North Louisiana or Arkansas area in the Nacatoch sand at the shallow depth of 896 feet. The well is in sand at 892-96 feet, and, it is for this reason that it is important.

The Nacatoch sand always has been the most prolific source of gas of any formation of the Cretaceous age, but in the No. 1 Hammock it is at the shallowest level at which such big production has been obtained. The rock pressure of the well is believed to be around 400 pounds but it has not been tested. The first blowout recorded a pressure of 395 pounds but it is believed the pressure has been increased.

This well is one of a series of tests being drilled by B. A. Hardy as trustee in the development of an extensive potential gas acreage in the Greenwood and Waskom districts to create a large reserve in connection with the recent launching by the Moody-Seagraves interests of Houston and Galveston, Tex., of another major gas distribution and transportation system. Several smaller gas wells have been completed the past few weeks in the Waskom and Greenwood fields but the new well is somewhat off from the main production and opens a new prolific source of supply. Several locations already have been staked there for additional shallow wells.

Two Carterville Gassers

The wildcat Carterville Field of northern Bossier Parish, added two more gas wells, W. R. Ramsey's No. 1 Robertson, Section 22-23-12, completed for approximately 20,000,000 feet of gas from sand at 3,087 feet, and Estes and associates' No. 1 Bobcau, Section 15-23-12. The latter well was left open only 15 minutes but gauged at the rate of 14,500,000 feet of gas daily. There was some oil with the gas estimated at 25 bbls. daily.

The Estes well was one of the original wells drilled in the field, being completed over a year ago from a shallow sand at 2,721 feet. At that level it produced about 40 or 50 bbls. daily for a short time but never proved a commercial well. Since a deeper sand has been uncovered the Estes well has been deepened to it.

The Carterville Field is the one in which for a time operators of this division had the strongest hopes for a new oil field. A few wells completed have made some oil but the principal production so far has been gas with considerable salt water. As a result, the majority of operators are drilling only with the intention of developing gas resources.

At present there is no outlet for Carterville gas but with the completion, expected the middle of July, of the Magnolia Gas Co.'s 12-inch line to the field there probably will be a renewed drilling activity in that district. The Magnolia line will connect with the company's main line from the Sarepta Field to Waskom, and thence to Beaumont, Tex.

The only important development program under way in North Louisiana and Arkansas so far as the oil industry is concerned, is the play to increase gas reserves. There is considerable competition among gas companies wherever there is a potential gas source. With this in view, several other companies have had their eyes on Carterville as all wells there have yielded from 13,000,000 to 40,000,000 feet each daily.

The possibility of opening an entirely new gas field was seen last week with the blowout of the Ohio Oil Co.'s No. 1 McCarty, Section 5-12-1w, on the Sikes salt dome in Winn Parish. This test blew out from a depth of 2,642 feet making an estimated 10,000,000 feet of gas daily and was the first strike of any importance in the recent play to inland salt domes of North Louisiana.

However, as the test now stands it only bears watching and it may be a week before anything new can be learned regarding its real importance. The past week was spent in killing the gas flow and setting casing as there was no casing in the hole other than the 10-inch surface string at 200 feet. A 6-inch string has been cemented at a depth of 2,222 feet, or 422 feet off the bottom of the hole. Extreme difficulty was met even in getting the casing down to the 2,222-foot level.

Another wildcat gas find was recorded during the week in the completion of Tunica Petroleum Co.'s No. 1 Lacroix, Section 8-7-2e, eastern LaSalle Parish, making 1,000,000 feet daily from sand at 754 feet. This is one of numerous tests drilled by the Tunica Petroleum Co. and other companies in the search of oil and gas along the Angelina-Caldwell flexure, most of which have not yielded especially favorable results.

Union County Wildcat

The new wildcat district in Union County, Arkansas, opened by the Ohio Oil Co.'s No. 1 Crain, Section 1-17-14, is looking a little better to operators here than at first. The well, which was completed 10 days ago, pumping 50 bbls. of clean 33 gravity oil from sand at 3,014 feet, is holding up production. Saturday a little water, approximately 1 per cent, showed up in the centrifugal test, bu this was the first sign of any water.

Many operators have been a little skeptical of getting a commercial field there because the sand was believed to have been same as that encountered in several deep wells in the East El Dorado and Lawson fields, which proved very short lived and in which the wells stopped flowing or turned to salt water.

The manner in which the well is holding up is stimulating new interest in that entire part of Union County, Arkansas, north and northeast of Urbana and East El Dorado Field and southeast of Smackover. Previous to the completion of the Ohio well, Rovenger Oil Corp. got a small pumper in Section 4. Now the Ohio Oil Co. already has another test, the No. 1 Pumphrey, in Section 1, drilling near 2,000 feet. Even as far west as Section 12-17-15 drilling is being stimulated, and W. R. Keever, who has purchased from H. R. Morgan a 160-acre lease there already has started to deepen one of the old wells on the tract to the level of the Ohio's No. 1 Crain.

This lease trade was one of the most interesting during the week. The deal was consummated for a consideration of $29,000. The well to be deepened is No. 2 Ezell, formerly abandoned at a depth of 2,880 feet.

Interest of operators in this division also is focused on showings made in three rank wildcats, all in Arkansas, and all of which will be tested in the next few days. In Miller County, Arkansas, about 15 miles due east of Texarkana, Lenz and associates encountered a rich appearing sand at a reported depth of 3,049 feet in No. 2 Dule, Section 28-15-26. The 4½-inch casing is cemented at 3,040 feet.

The Lenz test is drawing the most attention, due to its "wild" location, but Magnolia Petroleum Co.'s No. B-1 Stout, Section 28-14-16, Ouachita County, southeast of Camden, has 8¼-inch casing cemented at 2,092 feet, below which at a

DRY HOLES IN EDDY COUNTY ONLY RESULTS IN EASTERN NEW MEXICO

By Special Correspondent

ARTESIA, N. Mex., July 2.—Two failures were reported in the past week in review, both in Eddy County. Flynn, Yates & Welch's No. 4 Dunn, NE SE Section 10-18s-28e, was dry and abandoned at 2,500 feet, and the Empire Gas & Fuel Co.'s No. 1-B permit, SE cor. NE Section 34-17s-27e, was dry and abandoned at 2,500 feet.

There are only 4 active drilling wells out of a total of 10 drilling operations in the northeastern counties of the state and 24 active drilling wells out of a total of 53 drilling operations in the southeastern fields.

In Guadalupe County the Hanchett Oil Co. spudded in No. 1 Rutherford, SE cor. SW NE Section 24-8n-24e.

In Lea County, Leonard Levers' No. 1 State, SE cor. SW Section 11-16s-32e, was drilling at 4,065 feet. The Texas Company's No. 1 permit, SW cor. Section 34-17s-33e, was drilling at 5,025 feet with a little water showing. Inglefield-Bridges' No. 1 State, NE SE cor. Section 4-17s-34e, was fishing for 8-inch pipe, total depth of hole 4,876 feet. The Exploration company's No. 1 patent, C NE Section 25-18s-35e, was drilling at 3,540 feet. The Texas Production Co.'s No. 1 permit, SE cor. Section 4-20-34e, was drilling at 320 feet. There was 4 bbls. of salt water at 236-51 feet. Covert and others' No. 1 State, NE cor. NW Section 15-21-33e, was drilling at 4,080 feet. The Texas Production Co.'s No. 1 permit, SE cor. SW Section 5-22s-38e, was rigged up. The same company had a fishing job at 3,040 feet in No. 1 Rhodes, SE NE NW Section 22-26-37e.

In Socorro County, Perrin and others' No. 1 fee, SW cor. SE Section 30-5s-1e, was fishing at 3,042 feet.

In Torrance County, the Duran-Coane Oil Corp. was drilling by tools in No. 1, SW NE Section 31-3n-15e, total depth 1,267 feet. No report was had on the four other operations in Torrance County.

Chaves County

The Twin Mounds Drilling Co. spudded No. 1 Farrlander, SE cor. SW Section 11-6s-27e. Buffalo-Roswell Oil Co.'s No. 1 State, SW cor. Section 25-11s-27e, was drilling at 4,158 feet. The Arena Oil Co. was rigged up on No. 1 Nell, C NW SE Section 18-13s-31e. The Texas Production set 6¼-inch casing at 3,760 feet in No. 1 Dunken Dome, SW SW Section 29-17s-18e.

In Eddy County

In Eddy County the Hammond Oil Co.'s No. 1 patent, NW cor. SE SW, Section 15-16s-26e, was drilling at 1,110 feet in a hole full of water. The Texas Production Co.'s No. 1 permit, NE cor. SW Section 25-16s-31e, set 8¼-inch casing at 3,320 feet. W. A. Stone had a small showing of oil at 1,595 feet and was drilling at 1,690 feet in No. 1 Knulick, SW cor. NW NW Section 25-17s-26e. Kelly and others were having engine trouble at No. 1 permit, NE cor. NW NW Section 27-17s-27e, which was at a total depth of 600 feet. The Skelly Oil Co. was drilling ot 4,107 feet in No. 1 permit, NE cor. Section 22-17s-31e. The Midwest Refining Co.'s No. 1 Perry, SW cor. NW, Section 1518s-26e, had casing set at 1,247 feet and was being tsted. Compton & Smith were drilling below 900 feet in No. 1 permit, NW cor. NW SE Section 2-18s-27e. R. D. Compton was moving in material at No. 3 State, NW cor. SW NE Section 2-18-27e. George Getty, Inc., was drilling below 1,010 feet in No. 1 permit, SE cor. Section 14-20s-29e. Marland Oil Co.'s No. 1 permit, CWL Section 11-20s-30e, was shut down at 2,930 feet on account of engine trouble. George Getty, Inc., was spudding No. 1 Lenau, NW cor. Section 33-22s-27e. Superior Oil Co.'s No. 1 Keck, SW cor. NW Section 33-23s-28e, had a hole full of water at 1,415 feet and was drilling at 1,418 feet.

Northeastern Fields

In Colfax County, Hickey & Brown's No. 1 Logan, C NE NW Section 6-25n-24e, was drilling with a machine at 300 feet.

In Curry County the Frio Oil Co.'s No. 2 Saunders, NE cor. Section 11-5n-36e, was drilling by tools at 1,239 feet. Steinberger and others had run 10-inch pipe to 1,100 feet in No. 1 Dennis, C NW Section 21-3n-36e. The Hassen Petroleum Co. spudded in and shut down No. 1 Laird, SW SE Section 22-8n-36e.

In Quay County the Gibson Oil Corp. was fishing at 3,600 feet in No. 1 permit, SE cor. NW NW Section 25-8n-32e.

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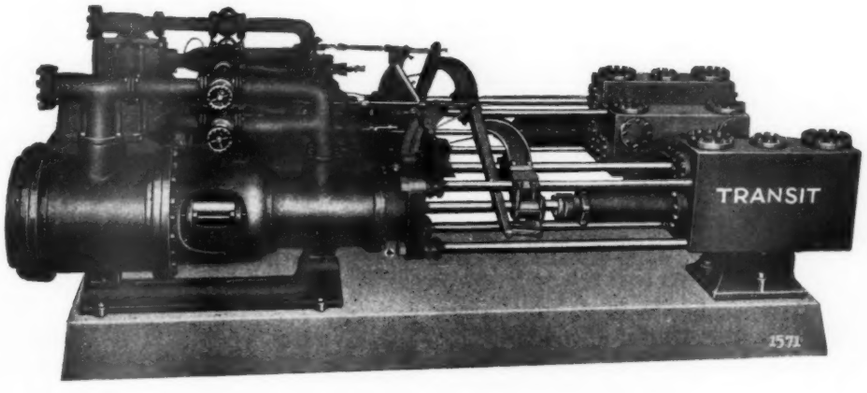

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depth of 2,095-97 feet it has a good looking sand. In Bradley County, Johnson & Adams have 3 feet of oil sand at 2,201-04 feet in No. 1 Southern Land Co., Section 12-12-12, and have 6⅝-inch casing cemented at 2,200 feet.

Operators say possibilities of production are favorable in each of the three tests and results probably will feature developments in this division the next few days.

Nevada Oil Producer

The biggest oil producer completed during the week was in Nevada County, Arkansas, where J. J. O'Brien got a 150-bbl. pumping well from sand at 1,142-45 feet. There was a total of 18 completions, of which only four were oil producers. These, including the Nevada County well and the Ohio's No. 1 Grain in Union County, added only 235 bbls. of new production. Four wells were gassers, while the remainder were abandonments.

Daily average production of the division reflected a change of only 815 bbls. during the week, a decrease being recorded. Production by fields was:

NORTH LOUISIANA	
Caddo light	10,405
Caddo heavy	5,805
Homer	5,050
Haynesville	7,770
DeSoto-Red River	4,045
Elm Grove	675
Bellevue	1,345
Cotton Valley	5,715
Urania	8,835
Pleasant Hill	565
Total	50,210
ARKANSAS	
El Dorado	6,160
Lisbon	3,750
Smackover light	11,055
Smackover heavy	88,000
Stephens	1,420
Nevada	1,450
Bradley	125
Total	111,960
Total both states	162,170
Total last week	162,985
Decrease	815

Detailed operations in proven fields during the week were:

NORTH LOUISIANA

Bossier Parish

Humble Oil & Refining Co.'s No. 30 Bliss & Wetherbee, Section 15-19-11, Bellevue deep test, failed to get a showing in a sand tested with a testing device at 2,739-67 feet. This is the third dry test, the first being at 1,994 feet and the second at 2,685 feet.

Caddo Parish

Arkansas Natural Gas Co. has encountered 26 feet of sand at a total depth of 2,430 feet in No. 8 Gayle, Section 30-16-12, and is giving it a test. This company is drilling at 1,665 feet in No. 2 Lane, Section 13-21-15. In this test 15½-inch surface casing has been set at 275 feet. Askew and associates are drilling in lime at 2,679 feet in No. 1 Elliott, Section 12-19-16. J. R. Bahan is arranging to make a test of sand encountered at 2,300 feet in No. 3 Stringfellow, Section 19-17-16, Waskom Field. Bayou State Oil Corp.'s No. 30 Hoss, Section 24-22-15, is shut down waiting on a standard rig with the hole at a depth of 1,047 feet. Bethany Oil & Gas Co., after abandoning temporarily No. 1 Offenhauser, Section 1-20-16, has resumed operations and is fishing for drill stem at 2,225 feet.

Dixie Oil Co. is down 2,900 feet in No. B-5 Files & Mabry, Section 14-21-16. This company's No. 8 Fitzsimmons, Section 14-21-15, is down 3,647 feet, and the No. A-E Noel, Section 13, is drilling at 3,862 feet. Arrangements are being made to resume drilling in No. 10 Slattery, Section 27. Falcon Drilling Co.'s No. 1 Schmidt, Section 27-20-15, is drilling at 2,040 feet.

Gulf Refining Co. is fishing for the drill stem in No. 269 Ferry Lake, Section 29-20-16, after reaching a depth of 2,993 feet. This company's No. 13 Tyson, Section 14-21-15, has been completed making 28,000,000 feet of gas and a spray of salt water daily from a sand at 3,730 feet. The gas has a rock pressure of 865 pounds.

B. A. Hardy is drilling at 1,882 feet in No. 2 Angurs, Section 6-16-16. His No. 1 Bickham, Section 23-18-16, is in chalk rock at 1,660 feet. His No. 1 Hammock in Section 27-18-15, has been completed after blowing out in a sand at 892-96 feet. It is good for 36,000,000 feet of gas daily. There is a light spray of salt water. No. 1 Wheeler, Section 18-18-16, has been abandoned temporarily with the hole down 986 feet. It tested a show of gas and salt water at that level. Magnolia Petroleum Co.'s No. 1 Bell, Section 4-17-16, is drilling shale at 1,913 feet. This company is drilling out cement at 2,910 feet in No. 2 Caddo, Section 8-20-15. It has a rig up for No. 2 Bryson, Section 8-17-16, and also one for No. 21 Robertson, Section 23-21-15.

Marshall Natural Gas Co. is drilling in shale at 1,947 feet in No. 1 Sharp, Section 22-18-16. J. M. Miller has a 5-bbl. pumper in No. 7 Solly, Section 22-21-15, producing from sand at 1,616 feet. Ohio Oil Co. has abandoned temporarily No. 1 E. Plum, Section 32-23-16, after drilling to a depth of 1,619 feet. This company's No. 25 Smith, Section 12-21-15, is in lime at 3,880 feet.

Shreveport Oil Corp.'s No. 2 State, Section 27-21-15, is down 2,212 feet where 4½-inch casing has been cemented. Simplex Oil Co. has started operations at No. 2 Schmidt, Section 15-20-15, and is drilling at 1,980 feet. The 10-inch surface casing was set at 110 feet. This company tested salt water in a sand at 2,387 feet in No. 3 Thomas, same section, and is plugging back to a depth of 2,202 feet.

Standard Oil Co. has a derrick up for No. 182 Stiles, Section 33-21-16. This company's No. 185 Stiles, same section, is shut down waiting on a standard pumping rig. It has a sand at 1,841 feet. No. 186 Stiles is being rigged up. This company's No. 2 Trosper, Section 34-18-16, is drilling at 905 feet in a sand topped at 903 feet.

The Texas Company is drilling gas rock at 902 feet in No. 1 Alexander, Section 27-18-16. This company's No. 47 C. M. L. Co., Section 23-21-15, is down 3,657 feet, is shut down temporarily. No. 4 Hutchinson, Section 9-15-12, is reaming at 939 feet. A test was made at this depth showing 500,000 feet of gas and same salt water. No. B-13 Noel, Section 14-21-15, is drilling hard lime at 3,345 feet. Throll Oil Co.'s No. 11 Bashara, Section 23, is down 2,150 feet. This is an old well being deepened. Woodley Petroleum Co. has a rig up for No. B-1 Knight, Section 3-15-12.

LaSalle Parish

Natural Gas & Fuel Corp.'s No. M-9 Urania, Section 20-10-2e, is shut down at 1,580 feet waiting on a standard pumping rig. Six-inch casing was cemented at 1,557 feet. Sackrider and associates have derrick up for No. 1 State, Section 26-10-1e.

Monroe District

Consolidated Carbon Co. has a location staked for No. 1 Perry, Section 14-20-4e, Morehouse Parish. In this parish, Falcon Drilling Co.'s No. 1 Gladney, Section 5-21-7e, is drilling at 1,860 feet. Natural Gas Products Co.'s No. 20 Crossett, Section 21-23-7e, is drilling at 1,950 feet. W. C. Feazel is down 250 feet in his new test, No. 1 Faulk, Section 15-20-4e, after drilling out the 12-inch plug cemented at 190 feet.

In Ouachita Parish, Jordon Drilling Co. is down 1,000 feet in No. 2 Fudican, Section 25-18-4e. Eight-inch casing was cemented at 890 feet. Ladell Properties, Inc., has completed No. 40 fee, Section 29-20-5e, gauging 10,000,000 feet of gas daily from sand at 2,234 feet. This operator has cemented 6-inch casing at 2,142 feet in No. 41 fee, Section 31-20-5e.

C. E. Calmette's No. 1 Tugwell, Section 21-22-1e, Union Parish, has been shut down after reaching a depth of 2,405 feet. In this parish, Natural Gas Products Co. has a new test, No. 2 Peak, Section 12-20-3e, which is down 100 feet. Southern Carbon Co. cemented 12½-inch surface casing at 185 feet in No. 1 Gulley, Section 19-20-4e, and is drilling now at 600 feet.

Webster Parish

W. T. Hunt has a fishing job in No. 1 Bistenau, Section 35-18-10. This test is down 1,004 feet. Louisiana Oil Refining Corp. has encountered an oil sand at 2,573-79 feet in No. 7 Gray, Section 28-21-10, and is waiting on a standard pumping rig. Magnolia Petroleum Co. is drilling sand rock at 3,246 feet in No. 3 Cox, Section 23, and has cemented 6⅝-inch casing at 2,544 feet in No. 2 Marshall, Section 21. In the latter section, Magnolia Petroleum Co. also has a rig up for No. 3 Marshall. In Section 32-23-9, Haynesville Field, this company is rigging up No. 1 Obier, Northwest Louisiana Gas Co. is drilling at 4,340 feet in No. 1 Coyle, Section 22-21-10. In the same section, Ohio Oil Co. is drilling in lime at 3,915 feet in No. 4 Bank. Woodley Petroleum Co. has cemented 9-inch casing at 2,730 feet in No. B-1 Cox, Section 23-21-10.

ARKANSAS

Union County

Atlantic Oil Producing Co. has cemented 6⅝-inch casing at 2,072 feet in No. 11 Dumas, Section 9-17-16, Lisbon Field. In the East El Dorado Field, Grimes & Jones are drilling at 840 feet in No. 1 Hill, Section 7-18-14. Twelve-inch surface casing was cemented at 170 feet.

In the Norphlet area of the Smackover Field, Gulf Refining Co. is rigging up for No. 11 Berry, Section 6-16-15. Holli-

(Continued on Page 112)

RANK WILDCATS ENCOUNTER SANDS IN NORTH LOUISIANA-ARKANSAS

By Neil Williams

SHREVEPORT, La., July 4.—With three rank wildcats encountering sands showing oil and with two additional tests in the Pleasant Hill district being tested, wildcat operations in the North Louisiana-Arkansas division promising some interesting developments the next few days.

Wildcatting the past week added two gas wells, one of which is making some oil, in the Carterville area of northern Bossier Parish, Louisiana, and a small gasser and a small producer in eastern La Salle Parish, the latter two wells being results of an intensive drilling campaign by the Tunica Petroleum Co. on the Angelina-Caldwell flexure.

The report of finding a good oil sand in Lenz and associates No. 2 Dale, Section 28-15-26, Miller County, Arkansas, caused a rush of scouts to the test. Reports as to the depth of the hole are conflicting but it is believed down at least 3,049 feet. This sand is expected to be tested late Monday. The test is a rank wildcat about 15 miles due east of Texarkana, Miller County.

Two other Arkansas wildcats have casing cemented on sands having oil shows, these being Magnolia Petroleum Co.'s No. B-1 Stout, Section 28-14-16, Ouachita County, and Johnson & Adams No. 1 Southern Land Co., Section 12-12-12, Bradley County. The former has two feet of sand at 2,095-97 feet, and the latter 3 feet at 2,001-04 feet.

In the Pleasant Hill district of Sabine and De Soto Parishes, Louisiana, C. W. Robinson and associates are drilling out the plug cemented at 3,104 feet in No. 1 Hamlin, Section 6-9-13. This is the farthest southwest test in the district. It will be bailed within the next few days. Magnolia Petroleum Co.'s No. 1 Logan, Section 17-10-12, De Soto Parish, also is in the sand.

Ohio Oil Co. has killed the gas blowout in No. 1 McCarty, Section 5-12-1w, on the Sikes salt dome in Winn Parish, and has cemented casing at 2,222 feet, 422 feet off bottom. If this makes a good well, it is expected to stimulate considerable drilling in this vicinity and other salt domes in North Louisiana as operators explain that the presence of gas on a salt dome indicates the existence of oil.

The biggest wildcat play in Arkansas is expected to develop in northeastern Union County where Ohio Oil Co.'s No. 1 Crain, Section 1-17-14 continues to produce around 50 bbls. of clean oil daily. Several new tests are starting in this vicinity, and several some distance away will be drilled to the level at which the No. 1 Crain encountered the pay.

Some distance southeast and northeast of the Lawson-Urbane district, W. D. Wingfield's No. 1 Hadley, tested dry in broken sand at 2,290-2,314 feet, but is being drilled deeper.

A derrick is being built for another wildcat in Ashley County, Arkansas. This test, the No. 1 Keller, Section 10-19-5, will be drilled by A. C. Glassnell and associates, who have acquired an 8,000-acre block in that district.

Nine wildcat tests were abandoned during the week, 6 in North Louisiana and 3 in Arkansas.

Detailed operations in unproved fields during the week were:

NORTH LOUISIANA

Bienville Parish

W. E. Hicks and associates are drilling at a depth of 1,513 feet in a shale formation in No. 1 Hodge Hunt, Section 21-16-5.

Bossier Parish

Magnolia Petroleum Co. has a rig up for a new test in the Carterville area in the northern part of the parish. This is No. 1 Rogers, Section 21-23-12. W. R. Ramsey's No. 1 Dodson, Section 16, still has the liner stuck in the Christmas

(Continued on Page 113)

SMITH DEEP TEST IN LIMESTONE COUNTY COMPLETED AS A GAS WELL

By Special Correspondent

CORSICANA, Tex., July 2.—E. L. Smith and others' No. 1 Stuberanch, on the Varella Survey in Limestone County, has been made a gas well. It is good for 10,000,000 feet of wet gas with a spray of oil. The total depth, estimated, is 5,792 feet.

C. W. Breen and others' No. 1 Dies, Garrison Survey, in Limestone County, is shut down at 3,734 feet. The Pandem Oil Co. set pipe at 4,489 feet in No. 1 Bassett, Walker Survey. Dillon & Hammond's No. 1 Fenner, Hoskins Survey, set 8¼-inch casing at 2,887 feet and was shut down at 2,931 feet.

In Navarro County the Sun Oil Co.'s No. 3 Swink, Boren Survey, is shut down at 5,410 feet. Byrd and others' No. 1 Garrett, Boren Survey, had a showing of oil in sand at 3,219-3,224 feet. The crew was waiting for cement to set before testing. Magnolia Petroleum Co. has set casing at 4,354 feet and will drill deeper in No. 1 Marshall, Chambers Survey.

In Anderson County, Cosden and others were drilling in shale at 1,560 feet in No. 1 Douglass, Simpson Survey. The Humble Oil & Refining Co.'s No. 2-A Southern Pine Lumber Co. was drilling at 4,552 feet.

In Cherokee County, the Kirby Petroleum Co.'s No. 1 Conner, Sessions Survey, set 10-inch pipe at 1,850 feet. Humble Oil & Refining Co.'s No. 1 Reynolds Mortgage Co., Isaac Durst survey, was drilling at 3,667 feet. The same company's No. 2 Earl & Ragsdale, Johnson Survey, set casing to test sand cored at 4,227-28 feet. The Magnolia Petroleum Co. has abandoned its test on the Sumner farm, Brewer Survey, at a total depth of 4,336 feet. A sand at 4,328-34 feet when tested showed only salt water and the test was considered a failure.

In Henderson County the Henderson Oil Co. passed through a hard dry sand at 3,205-10 feet in No. 1 Perry, Susan Jones Survey.

In Hunt County, the Amerada Petroleum Co.'s No. 1 Walter Grainer, James Hamilton Survey, shut down at 3,177 feet.

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Twenty-one Feet in Humble's Gulf-Dennett Well. Deeper Drilling Possibilities in Mirando Area

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 4.—Twenty-one feet of rich oil sand in the Humble's No. 1 Gulf-Dennett, in the Kingsville Field in Block 18, of Section 38, which the company is arranging to test at 2,131 feet, is the most encouraging news that field has produced for some time. The well is a little to the west of where Humble has been doing most of its drilling. The theory seemed to be the best stuff would be northeast after the Humble completed four wells in a group in that field three-eighths of a mile east of the No. 1 Gulf-Dennett. Use of a geophysical instrument went contrary to that theory and the Humble proceeded to make two locations to the west and the well on the Gulf lease seems to indicate that the instrument may be right. Efforts were made to test it through a drill stem tester but it failed and the last report is the company will set casing and bail. The No. 4 Kleberg, a half mile southwest of the No. 1 Gulf-Dennett, is starting to drill and will further test the new theory.

Cole Company Wells

In proven fields little out of the ordinary happened the past week. Cole Petroleum Co. opens its No. 36 Benavides in Webb County daily and the well is continuing to show considerable oil. This well, completed some weeks ago, opens a new producing spot 3 or 4 miles west of the Cole gas field. It is already proven as a new gas field with two wells completed. No. 36, with 8¼-inch casing is a 75,000,000-foot gas well. No. 44, located 1,500 feet south, was reported in this correspondence as a 25,000,000-foot well. It has the same rock pressure, however, and the smaller volume is accounted for by the fact that it is cased with 5⅝-inch casing. No. 43, located 1,500 feet east, is standing. It made considerable oil when tested but is thought by the owners not to have drilled into the sand producing in the other wells but to be just above that. It was reported in this correspondence as a failure but is a failure only in the sense that it has not yet made a commercial well at the present depth. It is understood it will be tested further at the present depth, however, before drilling deeper.

Interest in this new pool is very lively since it is in a deeper sand than that producing in most of the Mirando area and is revealing the possibilities of deeper drilling in other areas in the Mirando district, Cole Petroleum Co. owning all the acreage around this spot.

MIRANDO COMPLETIONS

Jim Hogg County

Magnolia Petroleum Co.'s No. 23 Merchants State Bank, Survey 415 in the Randado Field has been completed at 1,236 feet making 25 bbls.

NEW LOCATIONS

Webb County

Columbia Petroleum Co., Inc. has made location for No. 16 Puig in Block 75 of Edgington subdivision of the Puig ranch in Webb County.

Starr County

Ramsey & Maxey had made location for No. 1 well in Survey 301 in Starr County at 150 feet to northwest lines and 2,400 feet to west lines and are moving on.

SAN ANTONIO COMPLETIONS

Atascosa County

Grayburg Oil Co.'s No. 17 Shaw, Jasper Survey, Atascosa County, in the Somerset Field, was completed making 8 bbls.

Bexar County

Grayburg Oil Co.'s No. 37 Ernest, Brown Survey, Bexar County, in the Somerset Field, was completed making 10 bbls.

Jackson County

Houston Gulf Gas Co.'s No. 1 White in Gale Survey, Jackson County, was completed a gasser at 2,670 feet gauging 30,000,000 feet.

Refugio County

Houston Oil Co.'s No. A-2 Rooke in Mullen Survey, Refugio County, at 1,410 feet was completed a gasser making 15,000,000 feet.

Milam County

Lowenstein Oil Co.'s No. 3 well, in the southern extension to the Rockdale Field, has been completed making around 20 bbls.

Wills Oil Co.'s No. 1 Taylor Wooten, within city limits, has been completed making around 10 bbls.

TESTS ABANDONED

Medina County

Western Gas & Fuel and C. E. Lange have abandoned location made in the Durst Survey for No. 6 Adams, 1,550 feet northwest of the No. 5.

Val Verde County

A. Blume and others' No. 1 Moore estate, Section 183, has been abandoned dry at 2,890 feet.

NEW LOCATIONS

Lavaca County

M. L. Benedum has blocked 14,000 acres and will put down a deep test near Ezzel due south of Hallettsville in Lavaca County.

Williamson County

Fritz Fuchs and Rummell Brothers have spudded in a wildcat test the No. 1 Rummell at Beyersville in Williamson County.

San Patricio County

George E. Smith is moving in machinery for test at White Point in San Patricio County.

Milam County

Coffield-Hale-Murphy's No. 1 Stephens has derrick up, 1½ miles south of production in a wildcat area.

Wills Oil Co.'s No. 1 Akes has been drilled in and showed a slight production and is being drilled deeper.

McCormick-Coffield-Hale's No. 1 Shelton, in the proven area is to spud in within a few days.

Cole Gas Field—Duval

Cole Petroleum Co.'s No. 38 Benavides, Survey 10, Block 12, located 155 feet to northeast and northwest lines, has derrick up; Maddox and others' No. 1 Bruni, Survey 1, Mariano Arispe grant, east 40 acres of Survey 133, is a location 150 feet to northeast and southeast lines. Houston Oil-Sun Oil Co.'s No. 4-A Benavides, corner of Blocks 405-406-411-412, is drilling at 100 feet. Houston Oil-Roxana's No. 1 Bruni, Block 23, Survey 11, located 100 feet to southeast lines and 110 feet to northeast lines, has been spudded in. Newton Drilling Co.'s No. 1 Bruni, Survey 9, is a location 500 feet to northwest lines and 150 feet to northeast lines. Trussell, Cezeaux & Putman's No. 1 Bruni is a location in Survey 10.

Piedras Pintas

Humble Oil & Refining Co.'s No. 6 Walsh, Survey 185, located 364 feet feet northwest of No. 4, is fishing at 3,594 feet.

Randado Field—Jim Hogg

Magnolia Petroleum Co.'s No. 23 Merchants State Bank, Survey 415, located 1,070 feet to east line and 1,200 feet to north line, is being put on the pump at 1,231 feet.

Kitselman & St. Albans

K. & S. Corp.'s No. 57 Holbien, Survey 17, Block 40, located 330 feet to NE cor., is drilling at 3,025 feet, after testing 16 tribles of salt water through drill stem at 2,998-3,003 feet.

Alworth Pool

Magnolia Petroleum Co.'s No. 22 Merchants State Bank, Survey 236, located 450 feet to west line and 150 feet to south line, is drilling at 2,820 feet. Alworth Brothers' No. 13 M. Garza, Survey 39, Block 6, located 150 feet to southeast lines and 450 feet to southwest lines, has rig up and delayed spudding in by heavy rains.

Schott Field—Webb

Laredo Oil Co.'s No. 13 Millam, NW NE SE Survey 457, located 150 feet to west line and 175 feet to north line, has been spudded in.

Albercas Gas Field

O. W. Killam's No. 4 Bruni, Block 64, located 150 feet to north line and 200 feet to west line, is drilling at 600 feet.

Aviator Pool

Columbia Petroleum Co.'s No. 15 Puig, skidding derrick over from No. 14 recently completed, located to be announced later.

Carolina-Texas Gas Pool

D. J. Simmons' No. 2 de la Garza, Survey 335, Block 8, located 150 feet to SW cor., is standing at 400 feet. Ward and others' No. 1 Webster, NW NE NW Survey 684, located 150 feet to NW cor., is fishing at 2,700 feet. Houston Oil Co.'s No. 1 Barnsley, Survey 268, Block 9, located 150 feet to SW cor., is milling out at 1,970 feet.

Cole Gas Field

Cole Petroleum Co.'s No. 46 Benavides, Survey 412, Block 5, located 1,032 feet to east line and 433 feet to south line, is drilling at 2,300 feet; No. 47 Benavides, Survey 412, Block 13, located 160 feet to east line and 450 feet to south line, is drilling in hard rock at 60 feet.

Miranco Valley Pool—Zapata

The Texas Company's No. 6 Jennings, Cerrito Blanco grant, located 7,200 feet to northwest lines and 16,800 feet to southwest lines, is in sand at 1,757-63 feet and testing. Killam-Duggan's No. 2 R. B. Cuellar, Cerrito Blanco grant, 1,500 feet to northwest lines and 2,700 feet to northeast lines, has rig up.

Charco Redondo Field

Duke and others' No. 3 Martinez, Block 22, Duke-Langford, Charco Redondo grant, 150 feet to southeast and southwest lines, is drilling at 400 feet. Har-

(Continued on Page 115)

WILDCAT IN VAL VERDE COUNTY HAS HIGH GASOLINE SATURATION

By B. D. Stevenson

SAN ANTONIO, Tex., July 4.—O. O. Owens, of Tulsa, tested 3,000,000 feet of gas carrying a high saturation of gasoline in his wildcat well on the Mills ranch in the northwest corner of Val Verde County in the center of the west half of Section 128 of I. & G. N. Railway Survey, Block 1, making it for the week the most important wildcat in southwest Texas. It is 50 miles down the Pecos River from the Yates Pool of the Mid-Kansas and Transcontinental in eastern Pecos County and gives a stretch of 150 miles in the Pecos River Valley from the Winkler County production on the northwest to the Owens well on the Mills ranch on the southeast with the Yates Pool and Crane-Upton County production in the middle. Depth of the Mills ranch well which is on the east bank of the Pecos River is 2,502 feet and in the top of a sand. It was the intention to drill a couple feet deeper and then await orders from the Tulsa office.

Whether or not the well connects up geologically with the other pools of West Texas it at least connects up geographically since they are all in the Pecos River Valley. One theory of the geological profession is of a granite ridge running east and west through Val Verde County, due to the finding of schist material in wells drilled farther south which may make the whole northern part of Val Verde County look interesting. Magnolia is now drilling in the northeast corner of the county.

Third Line From Yates

Illinois Pipe Line Co. is starting its third pipe line from the Yates Pool and it will run south to the Southern Pacific Railroad at Comstock or else farther down the line to Del Rio, that point to be decided later. This line will pass very close to the Owens well. The first two lines laid by the company from the Yates Pool run north to McCamey. The first built was a 6-inch line and it has been in operation for several weeks. The second, which was an 8-inch line, was filled with oil for the first time early last week. The 6-inch line is now to be diverted to a new tank farm being built at Hurdle, a little east of McCamey, and the new line, the third from the field, will run south and will be a combination 8, 10 and 12-inch line, and another new tank farm and loading rack will be built on the Southern Pacific either at Comstock or Del Rio. The 30 miles of 8-inch for the first section from the field has already been ordered and the full line has been surveyed.

Information as to the Illinois Pipe Line Co.'s third line south is from official sources and the distance to Comstock is 100 miles and to Del Rio 120 miles. Unofficially the oil industry is questioning whether the Illinois will eventually carry its line farther south another 275 to 300 miles to the Gulf Coast at Ingleside. Its two lines north give it shipping points on the Orient Railroad and the one south will give it a shipping point on the Southern Pacific. The capacity of the Yates Pool, if all wells were opened, would probably tax all three lines.

New Tests Starting

With the Ryeade Oil Corp.'s No. 1 Chittim in Maverick County still fishing for tools at 5,590 feet interest in southwest Texas wildcatting is turning to several new tests that are about to start or else have just started. Rains for the past week or two all through southwest Texas have delayed work in unproven districts. Two wells are starting in Zavala that will be watched. The J. G. Pundt well in northern Zavala and near the Uvalde County line on the West ranch has spudded in and set about 200 feet of surface casing and B. F. Thompson is practically ready to spud and probably will be drilling by the time this is being read. His well is southeast of Pundt. Both are on the West ranch. Several years ago National Oil drilled a well on the Pryor ranch to the west and got a good volume of gas and more recently the Sun Oil Co. on the division line between the Pryor and West ranches and in the same territory drilled and got a commercial gas well. Both were plugged and abandoned as there was no market for the gas. Both the Pundt and Thompson wells are likely to run into gas and gas at this time is in demand all through southwest Texas, and in either, or both.

(Continued on Page 111)

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Stark and Spindletop Wells Are Best

Six Deeper Tests Going Down at Spindletop. Wildcatters Moving Inland to Waller and Colorado Counties

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 4.—The Gulf Refining Co.'s No. 5 Lutcher-Moore in the new Stark (La.) Pool, reported early in the week as flowing 1,500 bbls. at 4,760 feet, is putting out 1,000 bbls. at the end of the week, pipe line oil. Same company's No. 2 Lutcher-Moore, the discovery well, which came in late in January last flowing 2,500 bbls., is still flowing 500 bbls. The discovery well is approximately 500 feet shallower than the second producer.

No. 1 Industrial Lumber Co. is drilling around 4,900 feet. The acreage there is owned jointly by the Gulf Refining Co. and the Standard Oil Co. of Louisiana. The pool is across the Sabine river 12 miles northeast from Orange, Tex. The oil is being handled by the Gulf company, which has a pipe line looped in to connect with the Vinton line.

The Magnolia Petroleum Co. got a 3,500-bbl. well in No. 1 on its tank farm on the extreme south end of the deep sand area on the southwest side of the Spindeltop Pool. Strainer was set around 5,000 feet. Its No. 2 Gladys, which extended the pool to the south as a 3,000-bbl. well initially, is still heading 100 bbls.

The Gulf company's well at Stark and the Magnolia company's at Spindletop were the features of the week in the Coastal region so far as completions are concerned. The Hull Pool contributed a fairly good well in No. 86 Phoenix lease of the Gulf Production Co. on the southeast flank. It came in flowing 1,200 bbls. at 4,250 feet. The Republic Production-Houston Oil Co.'s No. 84 Dolbear on the east side is pumping 75 bbls. at 2,400 feet.

Only 11 wells were completed during the week of July 2, of which 2 were dry and 1 a salt water hole. The new production aggregates 5,065 bbls. compared with 11,500 bbls. last week.

Estimated Gross Production

The estimated daily average gross production for the week is placed at 153,205 bbls., a decline of 1,651 bbls. from the previous seven-day period.

The estimate for each pool is as follows:

Pool—	Dly. Av.
Boling	2,085
Batson	1,325
Blue Ridge	4,325
Big Creek	3,750
Barber Hill	938
Dayton	30
Damon Mound	910
Edgerly, (La.)	1,200
Goose Creek	8,075
Humble	4,426
Hull	16,101
High Island	185
Jennings, (La.)	990
Lockport, (La.)	7,150
Markham	450
Nash	1,200
Orange	5,300
Orchard	125
Pierce Junction	7,225
Piedras Pintas	110
Spindeltop	62,000
Saratoga	1,190
Sour Lake	4,300
South Liberty-South Dayton	2,885
Stark, (La.)	1,500
Vinton, (La)	4,970
Welsh-Anse La Bute, (La.)	20
West Columbia	9,240
*Miscellaneous	1,200
Total	153,205

* Includes Nacogdoches, Washington and Kleberg Counties; Cameron, Calcasieu and Iberia Parishes, Louisiana.

The South Louisiana pools are credited with 16,430 bbls. of the gross output.

Southwest Fields

The estimated daily average gross for the Southwest Fields is placed at 33,530 bbls.

The estimate for each field is as follows:

Field—	Dly. Av.
Luling	16,475
Mirando-Laredo	12,750
Somerset	1,220
Callihan	30
Rockdale-Minerva	1,105
Lockhart, (Lytton Springs)	1,950
Total	33,530
Grand total for week	186,735
Grand total last week	188,170
Decrease	1,435

New Wells Quit

Anderson & Plummer's No. 1 Whitehead on the north side of Pierce Junction, which was reported in last week's review as a 3,000-bbl. well at 4,425 feet, 38 gravity oil, has sanded up and is being worked over. Cline, Smith & Cline's No. 2 Wilson on the northwest side of the Jennings (La.) Pool, which started off last week flowing 500 bbls. at 1,600 feet, is now pumping 300 bbls. of fluid, 100 bbls. of which is oil, at 1,600 feet.

On the northwest flank at Pierce Junction, the Rio Bravo Oil Co.'s No. 7 Settegast is pumping 165 bbls. at 4,550 feet. Lee and Woodward's No. 2 Settegast, on the south end of the lease, went into rock salt at 4,600 feet. J. F. Bashara's No. 3 Bender will make a pumper at 3,700 feet. The Marland Oil Co.'s No. 1 Prudent, which was deepened to 3,700 feet, is pumping 10 bbls.

The Rio Bravo Oil Co., a subsidiary of the Southern Pacific railroad, is drilling No. 8 Settegast there around 1,000 feet. Its No. 3 Bender is below 3,600 feet and No. 5 Bender is about 1,600 feet. Smith and others' No. 2 Parson is at 3,500 feet. Bashara's No. 1 M. J. Bashara is drilling about 1,475 feet. Locations have been made for Anderson & Plummer's No. 2 Whitehead; Moody Oil Corp.'s No. 2 Whitehead and the Leonard Petroleum Co.'s No. 1 Gilmore. The latter is a Washington, Pa. company and just completed a deep wildcat northwest of Port Arthur as a duster.

The Orange Petroleum Co. deepened No. 2 Merchant on the southwest side of the Sour Lake Pool and got salt water at 4,550 feet.

The East Side Oil Co. got the same in its No. 1 Ogden in the Saratoga Pool at 2,575 feet. The Cove Oil & Gas Co. has a location for No. 1 Cotton there.

In the Batson Pool, The Texas Company's No. 1 Sterling is drilling around 775 feet and the Sun Oil Co.'s No. 76 Paraffine is below 1,015 feet. The Sterling Oil Co.'s No. 6 Hooks is standing after bailing salt water last week at 1,475 feet.

Fort Bend Pools

The Fort Bend County pools offer nothing of interest this week. The Texas Company's No. 2 fee at Big Creek is pumping 120 bbls. of fluid, 20 of which is oil, at 3,700 fet and its No. 4 fee is making around 45 bbls. at 3,900 feet. The Gulf Production is drilling No. 29 T. W. Davis around 4,325 feet.

In the Blue Ridge district, the Navarro Oil Co.'s No. 2 Robinson on the northwest flank is bailing at 3,050 feet.

The Navarro Oil Co.'s No. 2-B Robinson is drilling around 1,800 feet. The Abercrombie Oil Co. has a location made for No. 3 Robinson. On the south flank, the Gulf Production Co.'s No. 11 West-Schenck is drilling below 2,875 feet. Its No. 15-C Blakely on the north is deepening. The Overly Production Co.'s No. 1 Blakely set 6⅝-inch casing at 4,850 feet and will make a test. W. E. Woodruff's No. 2 Adams is drilling at 500 feet.

The Humphreys Corp.'s No. 4-B Kirby on the east side of the dome at Barber Hill is being tested out on the pump at 4,150 feet. No. 5 is rigging. The Humble Oil & Refining Co.'s No. 1 Kirby is drilling below 4,435 feet.

In the Goose Creek Pool, the Gulf Production Co.'s No. 14 Chapman-Bryan is drilling around 3,600 feet. The Humble Oil & Refining Co.'s No. 71 Smith is at 4,556 feet and No. 72 Smith is drilling below 1,575 feet. The Powell Oil Co. will deepen No. 6 Bryan and the Port Oil Co. will do the same in No. 2 Adey.

In the Orange Pool, the Gulf Production Co.'s No. 4 Granger is at 4,224 feet. The Rycade Petroleum Corp.'s No. 14-B Coy bayou and the Texhoma Oil Co.'s No. 16 Chesson are both to be deepened. The Tillery Oil Co.'s No. 3 state land in Cow Bayou is rigging.

The Texas Company's No. 23 Arnold at West Columbia is drilling around 4,100 feet. No. 63 Hogg on the north side of the pool is waiting on a rig.

The Sun Oil Co.'s No. 11 Cade, at High Island in the extreme east end of Galveston County, close to the Gulf of Mexico, is drilling below 2,710 feet.

The Rycade Petroleum Corp. is rigging Nos. 15 and 16 Wisdom in the Nash Pool on the line of Brazoria and Fort Bend Counties. The Sinclair Oil & Gas Co. and Brazos Oil Co.'s joint No. 1 Wisdom on the north side at Damon Mound in the old shallow section, is drilling around 800 feet.

In the Hull Pool in Liberty County, the Republic Production-Houston Oil Co.'s No. 33 Dolbear is drilling around 2,875 feet. No. 62 Dolbear is below 2,000 feet. J. H. Antillery's No. 5 Abel is deepening at 2,510 feet. The Big Dome Oil Co.'s No. 2 Palmer is deepening at 985 feet. The Gulf Production Co.'s No. 10 Phoenix is working over at 2,635 feet. The Mecom Oil Co.'s No. 1 Mecom is working over. The Texas Company's No. 3 Taylor will be deepened. The Texas-Vacuum Oil Co.'s joint No. 5 Hannah is fishing at 3,400 feet. Locations have been made for the Texas-Vacuum's joint No. 7 Hannah; the Empire Gas & Fuel Co.'s No. 26 Barngrover and the Gulf Production Co.'s No. 21 Baldwin.

Spindletop Pool

The Rio Bravo Oil Co. reset strainer in No. 50 Texas and New Orleans railroad right of way, which cuts through from the north to the south in the deep sands at Spindletop. The well is flowing 1,000 bbls. at 4,250 feet. The Rio Bravo Co. has 14 wells on this narrow right of way strip and its daily average output is now around 2,700 bbls.

On the south end, the Magnolia Petroleum Co.'s No. 4 fee is drilling at 4,718 feet and No. 5 fee around 5,150 feet. No. 6 is below 3,000 feet. The Gulf Production Co.'s No. 3 McLean is deepening at 4,675 feet. No. 5-A is below 3,245 feet and No. 8 at 6,560 feet. No. 11 Oakwood is drilling at 4,565 feet. No. 12 Oakwood lost the hole at 2,255 feet. This is the test in which the bits from the Sun Oil Co.'s No. 14 McLean and No. 12 Oakwood came together in the same hole two weeks ago. The locations are 87 feet distant. The Sun Oil Co.'s No. 14 McLean is drilling ahead at 4,700 feet. It was around 3,500 feet when the accident occurred. Sun Oil Co.'s No. 12 McLean is at 5,900 feet with a derrick standing for No. 11. No. 15 is drilling around 5,185 feet. No. 1 Price is deepening at 5,500 feet and No. 5 Price is drilling below 3,600 feet. The Grayburg Oil Co.'s No. 1 McLean is drilling around 5,895 feet.

The Texas Company's No. 1 Garrick, one-half mile north of production, is drilling below 5,300 feet. The Rio Bravo Oil Co.'s No. 3 T. & N. O. is drilling deeper. The Hines Oil Co.'s No. 2 Gordon is around 3,325 feet. The Lord-Mothner Oil Co.'s No. 2 Banks is fishing at 4,200 feet. George White's No. 3 Rush is below 3,518 feet.

That the operating corporations believe there are prolific sands below 5,000 feet is attested by the number of holes now drilling at depths from 5,300 to 6,500 feet. Six such unusually deep tests are now drilling ahead there.

The Yount Lee Oil Co.'s No. 35 McFaddin bailed salt water at 2,800 feet and is now drilling deeper at 3,108 feet. No. 34 McFaddin is setting casing to test a sand showing oil at 4,975 feet. No. 25 Gladys is coring at 2,775 feet.

South Louisiana Pools

In the Lockport Pool, the Vacuum-Gulf Co.'s joint No. 6 Farquhar is bailing at 3,750 feet. No. 5 Farquhar is drilling below 4,875 feet. Casing was set in No. 4 Friedberg & Wolf at 3,165 feet. No. 2 on that lease will be drilled deeper. No. 6 Miller is drilling deeper. No. 16 Miller is fishing around 4,785 feet. No. 17 is drilling at 3,635 feet with a location for No. 18 Miller.

In the Edgerly Pool, the Rex Petroleum Co.'s No. 5 Hunter is sidetracking at 3,900 feet and No. 6 Hunter is drilling at 3,545 feet. The Gulf Refining Co.'s No. 42 Bright-Penn is below 2,765 feet. The Green Oil Co.'s No. 8 Moore is around 2,245 feet. The Hercules Oil Co.'s No. 2 Paraffine is drilling below 2,345 feet. C. M. Crotty's No. 12 Lilliard is fishing at 2,310 feet.

In the Jennings Pool, the Mentau Oil Co.'s No. 2 Pierce was abandoned temporarily at 2 080 feet. The Texas Company's No. 3-B Latrielle is around 1,890 feet. The Gulf Refining Co. has a location for No. 1 Leckelt.

In the Vinton Pool, the Gulf Refining Co.'s No. 42 Star is around 2,900 feet. The Louisiana-Colorado Oil Co.'s No. 1 Johnson is below 2,810 feet. The Vinton Petroleum Co.'s No. 37 Gray is drilling around 2,330 feet. Marrs McLean has a derrick up for No. 12 Gray. Wilson & Broach No. 5 Lyons is drilling deeper.

Miscellaneous

Having gone over the counties and parishes in Texas and Louisiana bordering on or close to the Gulf of Mexico, geologically and geophysically, wildcatters are inclined to move inland in their search for new districts. The Rio Bravo Oil Co. and J. A. Germany, of Dallas, have jointly spudded in a test in Brazos County, 3 miles southwest of Bryan. It is 1 mile south of No. 1 Vick abandoned by Germany some time ago. The joint interests will drill three tests in that county.

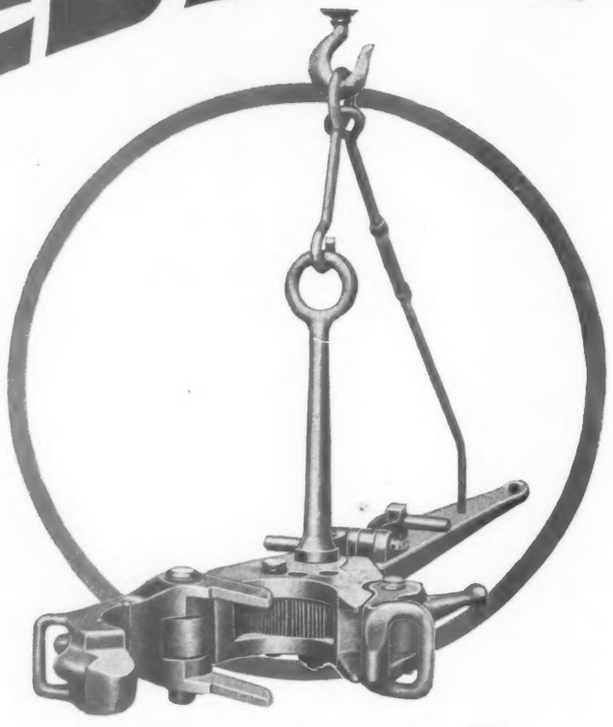
The Gulf Production, Humble Oil & Refining Co. and Templeton & McCarthy are making geophysical tests in Waller County. The Texas, Humble, Roxana Petroleum Corp. and other interests are leasing in Colorado County, between Columbus and Eagle Lake.

When leasing in connection with geophysical exploration the usual method is to pay a small bonus and an annual rental rate. If the seismograph and torsion balance fail to turn up anything favorable, the leases are surrendered and the bonus payment forfeited. In some cases it is possible to secure a lease from the land owner for six months at from 50 cents to $1 per acre, which gives time enough to explore geophysically and determine whether the results justify drilling or not.

The Gulf Production Co. has made a location for No. 6 Lutcher-Moore in the Stark (La.) Pool, 400 feet east of the discovery well and also for No. 7, which will be on the Industrial Lumber Co.

(Continued on Page 115)

The SPEEDIEST Tool Joint Tong



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Sunburst Has Several Good Wells

Pondera Still Questioned Whether a Gasser or 5 to 50 Barrel Oil Producer. Utah's Hopes in Salt Domes

By Frank B. Taylor
Staff Correspondent, Rocky Mountain Area

CASPER, Wyo., July 2.—In the Sunburst Field in Montana, the Hill-O'Neill-Lorensen well on Section 28-35-2 came in as a gusher from the Ellis sand at 1,467 feet. The Adams Oil Co. brought in another big well of about 400 bbls. on Section 33-35-1 also in the Ellis sand.

On Section 10-35-2, the Tom Davis Syndicate has a producer good for 40 bbls. and the Forty-Four Petroleum Co. brought in a small producer on Section 28-35-1, in a stray sand after finding the Ellis dry. This stray sand was above the Ellis and the hole was plugged back to it.

On Section 15-34-1, the Magic City Oil Co. has a high-grade producer making around 30 bbls. of oil from a stray sand and this oil has a gravity of 45 degrees, the usual run of crude from Sunburst Field being about 32 gravity.

On Section 9-34-1, the Baker and Barnhill interests have a producer good for 200 bbls. and this well enlarges the pool in that part of the field considerably.

The Queen City Oil Co. has a 20-bbl. well on Section 4-34-2 in the Ellis sand and the Radigan and Hungerford interests have a good well on Section 7-34-1, that will make 150 bbls. from the Ellis sand.

The California Co., the California Petroleum Co. and the Dakota Montana Oil Co. found dry holes the past week, mainly in the central part of the development. The Pan-Canadian Oil Co. has a dry hole on Section 32-35-1, and the Porter on Section 7-34-1 is also a duster.

In the Pondera strike, near Conrad, Pondera County, the reports differ. Some of the scouts claim the well to be a gasser only while others say it may make a commercial oil well. The oil is estimated at from 5 to 50 bbls. daily and is also said to be a heavy black crude only fit for asphalt production, like the crude found in the Devils Basin of Montana.

In the Cat Creek Field, on the Musselshell River which cuts across the east end of that field, a syndicate composed of Oregon business men will drill a deep test on Section 21-15-30.

The Baker Barnhill and Corey well on Section 9-34-1 in Sunburst, in the extreme southeastern part of the field and a mile ahead of production, found Sunburst and Ellis sands dry but discovered a production good for 70 bbls. in a stray sand in the Madison lime at 1,365 feet.

The Kropp Oil & Gas Co., drilling a wildcat 5 miles southwest of Sunburst town, found a 30-bbl. well in stray sand at 2,036 feet, far from any production. This oil is of very light gravity and not the same as regular Sunburst crude.

Salt Creek Completions

In the Salt Creek Field, the Midwest Refining Co. completed for its subsidiary companies five wells, three being Lakota sand wells. The Wyoming Associated Oil Co. has a 20-bbl. pumper on Section 24-40-79 at 1,138 feet and the same company also has a Lakota sand well on Section 26-40-79 at 2,503 feet that will only make an average pumper. It gauged 26 bbls. on a test.

The Mountain & Gulf Oil Co. brought in a producer in the second Wall Creek sand on Section 12-39-78 at a depth of 2,570 feet which will make a 50-bbl. well. The Midwest Oil Co. brought in a Lakota sand well on Section 23-40-79 that will make 25 bbls. at a depth of 2,503 feet. The Wyoming Oil Fields Oil Co. has a producer on Section 25-40-79 that will make a small producer at 2,523 feet in the Lakota sand.

In the Oregon Basin Field in Park County, the Continental Oil Co. is making a location for a deep well and will move in material at once. Like the Ohio Oil Co. this well will likely be drilled with a rotary outfit. When the fluid in the hole is only oil and water, the gas found in the Frontier formation in Oregon Basin, about 1,800 feet deep is very apt to clean the hole. The Ohio Oil Co. was the first to drill through the gas pressure and uncover the oil in the Embar sand in the Pennsylvania formation below.

The trunk line from the Buffalo Basin Field to the Hidden Dome, Greybull gas line is completed and the pipe line crews are busy on the Grass Creek and Worland laterals.

On the east side of the Teapot Dome, the Margalexon Oil Co. has a producer in the shale. This well was drilling for the Second Wall Creek sand but will make a producer in a shale lens found at 3,400 feet. It will do about 25 bbls. This well is outside of the Teapot boundary, about 200 feet from the line.

Utah Salt Domes

The oil men of Utah are basing their hopes on the future of the oil industry in Utah that the Cane Creek and other developments in eastern Utah will find salt domes such as are found productive in the Gulf Coast region of Texas and Louisiana.

The first salt dome was discovered in 1901 when Spindletop started to gush oil. For some time after the geologists and oil operators were at fault in trying to get a well directly on the top of the domes, but later studies showed that only the flanks were productive of petroleum and the crest of the structures was dry territory.

This condition is thought to account for the finding of a dry hole in the Snowden & McSweeney well on the Cane Creek Dome. The first well drilled by the Midwest Refining Co. in 1925 found commercial production at 2,000 feet, but owing to mechanical difficulties in shutting off water it was abandoned as a producer. The Snowden & McSweeney well was located directly on the top of the structure but failed to find the formations that carried oil in the discovery well of the Midwest, finding rock salt instead. It is therefore concluded that the Cane Creek Dome is a salt dome and that production may be found down on the sides of the structure.

The Utah Southern Oil Co. is drilling at 2,930 feet in a black shale on the Cedar Mesa Dome, San Juan County, and the same firm has a wildcat on the east anticline at 1,200 feet and drilling in limestone.

On the Elk Ridge Dome, the Midwest Refining Co. is drilling at 2,365 feet and running the 8¼-inch pipe. The Embar Oil Co.'s well near Moab is drilling at 3,850 feet.

The Empire Gas & Fuel Co.'s well on the Gibson Dome has reached a depth of 4,100 feet and is a dry hole, being abandoned. This well had been drilling in salt for the past 500 feet with an occasional shale break. A showing of live oil was found at 3,575 feet but nothing of commercial size developed in the drilling of the well.

Colorado Gas Commission

The Colorado Gas Conservation Committee will come into its authority July 12 and to this commission the city of Denver is looking for help in solving the question of rates for natural gas for the city. The City Council has secured the services of Gas Engineer King of Chicago who is working on the valuation of the gas when it reaches Denver.

Besides the gas matter, this newly-formed commission will have power to make rules and regulations for the operation of oil and gas wells in Colorado and among its members are some of the big men in the oil business in the Rocky Mountain region. Sid Keoughan, head of the Continental Oil Co.; Judge Fred W. Freeman of the Texas Production Co., and Charles Sherman, general manager for the Union Oil Co. of California, are to help formulate the regulations as members of the commission.

The Essok well being drilled near Boulder, Colo., is to be started again. The Repollo Oil Co. and the Essok Oil Co. drilled two wells near Boulder testing the deep sands. Neither well found any commercial showing and the area appears worthless to the majority of the oil operators. The officials of the Essok Oil Co., however, do not appear to be satisfied with the test and will drill the well deeper.

A report from Branson, Las Animas County, states that a driller on a well there was lowered 270 feet in a 24-inch hole and was able to throw a chain over a lost bit and bring it to the surface. The report could not be confirmed.

The Five Square Oil & Gas Co., drilling a wildcat about 2 miles northwest of Berthoud, Larimer County, has a showing of wet gas estimated at 2,000,000 feet at 2,932 feet. Drilling is being continued and the well is expected to test the Dakota formation.

The strike of the Peerless Oil Corp., on the Hiline Dome, Mesa County, where a strong gas flow was found in the Frontier formation at 1,800 feet, will be tested before the well is drilled deeper. This wildcat was intended to be drilled to the Lakota and Sundance sands around 3,000 feet.

More Taxes on Oil

Taxation of oil companies by county officials is the present fad in Wyoming. All the big oil firms that provide the funds for the modern improvements of this state have had their taxes raised this year and in Natrona County especially, in which the Salt Creek Field is located, the boost has caused grave concern to the oil operators.

The Midwest Refining Co.'s valuation of property last year was about $11,000,000 for taxation purposes. This has been boosted by the county authorities to a total of $41,000,000 this year. The Standard Oil Co. of Indiana had an assessed valuation of $4,500,000 last year while this year the same properties have been assessed at $7,000,000. Similar boosts have been made on the properties of the Ohio Oil Co., the New York Oil Co. and other firms engaged in the oil business.

The oil business has brought Natrona County from a poverty-stricken cattle range to a prosperous community with the largest city in the state as its county seat. Oil in tanks that has already paid a production tax is again levied upon and assessed a valuation over its present market value.

The oil companies are expected to carry the matter before the state authorities

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MORE TESTS IN THE DEVENISH AREA; IMPERIAL CYPRESS HILL FILING

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 2.—In southern Alberta, the Devenish Petroleums No. 1, LSD 5, Section 27-5-14w4, is reported to have about 1,000 bbls. of crude in storage. On the swab the well averaged around 250 bbls. a day, filling all the tanks available; after which operations were discontinued. Arrangements are being made to truck the production to the nearest railway, about 6 miles distant, and additional tanks are being secured. The well is to be put on the pump or a gas or air lift early in July. No effort will be made to deepen the well, which is about 6 feet in the sand. Latest samples of the oil are around 23 gravity, with some increase in the gas flow and no traces of water.

It is reported that Devenish Petroleums No. 2 will be located a quarter mile west of No. 1. A rotary outfit may be used for this test. Another test may be put down between 2 and 3 miles from No. 1. P. D. Chasey and associates of Montana are reported to have located a test across the road allowance from the Devenish No. 1 and will move a standard outfit to location early in July. Devenish Petroleums, Ltd., is in negotiation with a number of companies for further development of its extensive acreage on a royalty basis. It is reported that Imperial Oil, Ltd. has geologists examing acreage near Skiff.

"Tulsa of the North"

As a result of the reported strike, Skiff has experienced a considerable boom. The "Tulsa of the north" as it is already acclaimed by hopeful speculators was before the strike a quiet prairie hamlet. The place is on the Foremost branch of the C. P. R., the Devenish well being between 6 and 7 miles from the village. In the prairie boom days there was considerable activity in Skiff; but growth has been hampered by the repeated crop failures in this section of the southern Alberta "dry belt." Even the lumber yard and the grain elevators found the location unprofitable and moved away; and only a restaurant and a few stores remained among the earlier places of business. Since the strike, there has been a considerable boom in Skiff real estate. An outside lumber company has bought lots for a branch yard, a garage is being built and a pool hall is under way; and a new hotel is practically assured. There has been a steady stream of motor cars to the field, though road conditions in the immediate vicinity of the well have been anything but good.

Cypress Hills Filing

A striking new development has been the filing by Imperial Oil, Ltd. on 25,000 acres in the Cypress Hills area, southeastern Alberta. The acreage is in Township 7, Ranges 5 to 5 w4; and adjacent to the 80,000 acres blanketed earlier in the year by the Rowe interests of Toronto. Extensive work was done on this field in 1925 and 1926 by government geologists; and Imperial Oil, Ltd. geologists have been at work on the area for some time. The filing was done on instructions from the Imperial Oil, Ltd. head office at Toronto. It is understood that a total of 160,000 acres has been filed on the Cypress Hills structure this year by various interests. The Cypress Oil Syndicate of Toronto will spud in No. 1 test before the end of July, the

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Selover Sand Thought Over the Top

Wasem Zone at Alamitos Heights not Expected to Be Factor Until Seal Beach Decreases

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 2.—The Seal Beach Field appears to be definitely over the top as far as the Selover zone is concerned, and while the output will fluctuate from time to time it is generally conceded that the high point has been passed. The productivity of the recently discovered Wasem zone is still unknown and nothing definite along this line will be determined until it has been tested out in the center of the field.

The General Petroleum's No. 7 Wasem, the discovery, failed to hold up at 500 bbls., having declined since completion to a little less than 200 bbls. a day. The output from this well is cutting approximately 7 per cent emulsion, indicating the probability of edgewater. This, however, does not mitigate against the existence of a good sand in the center of the field as the discovery well is not very favorably located with respect to structure. With the limited information available it is not possible to predicate further possibilities with any degree of accuracy and one guess is as good as another.

The writer has interviewed a number of geologists and petroleum engineers and no two of them have been in entire accord; in fact only a few were willing to commit themselves one way or the other. In view of structural conditions existing in the other fields in Southern California the Wasem sand should be relatively thin, fairly well saturated and be correctly termed a high pressure zone. The gas pressure and saturation would ordinarily be conducive to high yields but the limited thickness of sand believed to exist may offset this advantage. In other words, based on precedent, the Wasem sand should be a high flash of short duration followed by a rapid decline.

Effect Minimized

The effect of this new deep Wasem zone on future production has come in for considerable comment during the past two weeks and, while it may possibly establish a new high, indications all point the other way. This deep zone cannot possibly exert any substantial effect on production within 30 days and, judging by recent developments at Alamitos Heights, it should not prove as great a menace as some anticipate as the Selover sand production at Seal Beach should fall off very appreciably in the meantime. Several drilling wells are definitely headed down in search of the recently discovered deep sand, and, barring any unforeseen difficulties, some of them should be in a position soon to enlighten the industry as to what the future holds in store. The Selover sand in the town lot area, while it has temporarily caused curtailment measures to be initiated in other fields, is not proving unduly profitable to independent operators as a whole. A careful check indicates that many independents operating in this town lot area will never pay out in excess of 50 cents on the dollar unless the deep sand is highly productive. For this reason operators are vitally interested in the possibilities of the deep Wasem zone, for this may enable them to come clean.

Another 10 days or two weeks will be a very interesting period as developments during this time should indicate the general trend of California production during the summer. One of the most interesting developments in connection with the anticipated deep drilling is the probability that some operators may be obliged to sit back and watch the other fellow drain his holdings. This unusual state of affairs is due to the fact that some holes cannot be deepened to advantage because of the present small diameter which practically precludes the landing of another string of pipe to shut off the reported intermediate water in addition to a liner. In other words, drilling wells right now are in a favorable position as they can pass up the Selover zone if desirable. Many producing wells on the other hand cannot participate to the fullest extent because of the small size hole.

Fewer Completions

The number of completions at Seal Beach during the past week was considerably less than heretofore but this is not indicative, however, of any general cessation of work, as there are something like 75 holes under way. The decision to make a bid for production in the deep Wasem zone may temporarily hold up completions during the coming week or 10 days, but once an objective has been established, drilling operations will be pushed ahead quite rapidly again. The Petroleum Securities is still by far the largest single operator in the Alamitos Heights section of the Seal Beach Field, and, while only a limited number of new wells are being started at the present time, the company is working on quite a number of incompleted drillers and former producers which have gone off production. The Petroleum Securities recently recompleted Nos. 2 and 3 on the Naples property, both of which were redrilled and deepened following their cessation of flow from original completion depths. No. 2 was deepened last week from 4,731 feet to 4,973 feet, from which point it was returned to production flowing 3,362 bbls. of clean 26.1 gravity oil daily. No. 3 Naples was recompleted a few days ago flowing 2,075 bbls. of clean 27.1 gravity oil daily after being redrilled and deepened from 4,720 feet to 4,895 feet. No. 6 Naples, a new well, was given a preliminary production test from 4,807 feet, but since it only registered a maximum output of 250 bbls. daily it may require additional drilling.

The Marland's No. 16 Selover came up to par on a production test and it is being listed as a 1,525-bbl. well, the oil testing 26.3 degrees. It is flowing through a seven-eighths inch bean under a pressure of 800 pounds. This well was carried down to 4,950 feet and finished with a 4½-inch liner carrying 275 feet of perforated. No. 13 Bixby was recompleted a few days ago after being redrilled and deepened from the Bixby zone at 4,450 feet to the Selover horizon at 4,750 feet. It was returned to production flowing 2,840 bbls. daily, the oil being clean and testing 27.6 degrees. The California Petroleum recompleted No. 4 Alamitos after deepening it from 4,660 feet to 4,920 feet and returned it to production flowing 1,105 bbls. of fairly clean 26.6 gravity oil daily. No. 5 Alamitos, a new well, is scheduled for completion within a few days. No. 1 Baily and No. 1 McMasters should also be completed soon. George F. Getty, who has three drilling projects nearing completion, redrilled and deepened No. 5 and returned it to production early in the week flowing 1,465 bbls. daily from 4,915 feet. The Superior also listed a recompletion, No. 1 Kenkel having been redrilled and deepened from 4,700 feet to 4,905 feet, from which depth it is now flowing 1,050 bbls. of clean 26.7 gravity oil daily. Dill & Compstock's No. 1 Alamitos was put on a pumping test at 4,775 feet and, while it is making 200 bbls. of clean 26.7 gravity oil daily, it will undoubtedly be deepened if the Wasem zone is proven highly productive. The Standard has resumed work on No. 11 San Gabriel following a temorary suspension, and this well is again headed downward with the Selover sand as its objective. No. 11 San Gabriel is an offset to No. 15 Bixby of the Marland, a Bixby zone producer. The Marland intended installing a gas lift on the latter, but when the Standard started deepening No. 11 San Gabriel drilling was resumed and it will be carried on down to the Selover sand to prevent drainage.

Disastrous Fire

Alamitos Heights was visited by a rather disastrous fire which affected eight wells and incidentally destroyed the rigs, well equipment and a number of tanks during the 12 hours which it raged. The fire was preceded by an explosion on the California Eastern's No. 1 Fueller, which presumably resulted from a leakage of gas which became ignited by some near-by flame. The derrick and equipment actually melted down in less than 30 minutes due to the terrific heat and near-by rigs were destroyed in regular rotation until the entire block was reduced to a mass of ruins. The Richfield's No. 1 Bonner, the last to go, was flowing approximately 1,000 bbls. per day in addition to making something like 2,000,000 feet of gas. The

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IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well and Location—	S-T-R	Depth	Status
General Pet., No. 1 Guiberson, Potrero	35- 2-14	Rig	wait. devel.
Cal. Eastern, No. 1 Cypress, Potrero	27- 2-14	4,825	gr. sd. drilling
Associated, No. 1 Cypress, Potrero	37- 2-14	4,460	suspended
Associated, No. 2 Cypress, Potrero	2- 3-14	4,650	gr. sd. drilling
Getty, George F., No. 1 Cypress, Potrero	35- 2-14	Rig	wait. devel.
Getty, Paul, No. 1 Cypress, Potrero	35- 2-14	Rig	wait. devel.
California Pet., No. 1 Sutton, Potrero	34- 2-14	Rig	wait. devel.
California Pet., No. 1 Armour, Potrero	35- 2-14	Rig	wait. devel.
Cole, Fred E., No. 1 Cypress, Potrero	35- 2-14	Rig	wait. devel.
Dill Oil Co., No. 1 Cypress, Potrero	35- 2-14	Rig	wait. devel.
Walker, Fred, No. 1 Cypress, Potrero	35- 2-14	Rig	wait. devel.
Getty, George F., No. 1 Tubbs, Rivera	25- 2-12	3,841	gr. sd. drilling
Circle Oil Co., No. 1 Pomeroy, Manchester	22- 3-14	4,128	suspended
Shell, No. 1 Mission, San Fernando	4- 2-15	2,360	coring
Sou. Calif. Drlg. Co., No. 1 Matteson, El Segundo	1- 3-15	4,870	fishing
Carr, O. P., No. 2 Foster, San Juan Capistrano	13- 8- 8	2,550	gr. sd. drilling
Cardiff Oil Co., No. 1 Oceanside, San Diego	24-13- 4	2,805	redrilling
O'Donnell, J. E., No. 2 Julian City, Los Angeles Co.	7- 4-14	.....	location
Thomason & McCoy, No. 1 Rinz, Saugus	27- 5-16	516	sd. drilling
Southwest Pet., No. 1 Ramsauer, Watts	4- 3-13	1,462	sd. sh. drilling
Reliance Inv. Co., No. 1 Leuzinger, Los Angeles Co.	8- 3-14	1,164	cleaning out
Shell, No. 1 Allec, Placentia	31- 3- 9	1,818	sd. sd. drilling
Standard, No. 1 Olive, Orange Co.	17- 4- 9	617	sd. drilling
Standard, No. 1 Rindge, Palms	36- 1-15	Rig	in litigation
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	1,049	hd. sd. drilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Associated, No. 1 Smith, Kettleman Hills	12-23-18	2,043	suspended
Bolsa Chica, Well No. 1 Kettleman Hills	30-23-19	2,642	bail. oil
General Pet., No. 1 Burbank, Kettleman Hills	30-23-19	3,105	cleaning out
General Pet., No. 2 Oschener, Kettleman Hills	26-22-18	3,080	gr. sd. drilling
General Pet., No. 1 Dome, Kettleman Hills	4-24-19	Rig	rigging up
C. C. M. O., No. 1 McGlashan, Kettleman Hills	17-24-19	4,040	gr. sd. drilling
South Coalinga, Well No. 1, Kettleman Hills	35-24-19	2,511	gr. sd. drilling
Gilbert, W. M., No. 1 Barritt, Kettleman Hills	20-23-19	Rig	rigging up
Ahlburg Gas Co., Well No. 1, Kettleman Hills	7-23-23	Rig	standing
Milham Expltn., No. 1 Kettleman, Kings Co.	2-22-17	3,521	hd. sd. drilling
Shell, No. 2 Berlywood, Moorpark	32- 3-20	3,560	hd. sd. drilling
C. C. M. O., No. 1 Hobson, Ventura Co.	22- 3-24	6,470	cemented
C. C. M. O., No. 1-B Hobson, Ventura Co.	16- 3-24	4,253	oil sand
C. C. M. O., No. 1 State, Ventura Co.	17- 3-24	501	sd. drilling
C. C. M. O., No. 1 U S., Ventura Co.	17- 3-24	Mtl.	building rig
Continental Oil Co., No. 1 Newhall, Ventura Co.	36- 4-18	2,595	testing
Continental Oil Co., No. 1 Burnham, Ventura Co.	22- 5-18	2,583	gr. sd. drilling
Milham Explin., No. 1 Sexton, Ventura Co.	19- 3-22	7,100	fishing
Standard, No. 1 Camarillo, Ventura Co.	29- 2-20	5,421	hd. sd. drilling
Standard, No. 1 Montalvo, Ventura Co.	17- 2-22	6,170	hd. sd. drilling
Petroleum Sec., No. 1 Diablo, Ventura Co.	4- 4-18	2,615	hd. sd. drilling
Parkford, E. A., No. 1 Strathern, Ventura Co.	5- 2-18	3,440	hd. sd. drilling
Star Petroleum, No. 1 Canet, Ventura Co.	13- 3-23	5,281	sd. sh. drilling
Richfield, No. 1 James, Ventura Co.	16- 5-18	3,509	gr. sd. drilling
Richfield, No. 27 Piru, Ventura Co.	35- 5-18	1,560	gr. sd. drilling
Milham Explin., No. 2 Buttonwillow, Kern Co.	8-28-23	4,662	clean. out
Milham Explin., No. 3 Buttonwillow, Kern Co.	7-29-24	4,001	set pipe
Pacific Eastern, No. 1 Bakersfield, Kern Co.	6-30-28	4,260	gr. sd. drilling
Royal Pet., No. 1 Machada, Kern Co.	31-30-28	Mtl.	building rig
C. C. M. O., No. 1 Quinn, Delano	23-25-27	1,723	core ahead
Miocene Oil Co., No. 1 Bluff, Kern Co.	34-27-28	Mtl.	building rig
Muroc Dev. Co., No. 1 Rosedale, Kern Co.	13-29-26	1,498	rebuild. rig
Standard, No. 1 Bacon, Kern Co.	27-28-20	3,490	br. sh. drilling
Petroleum Sec., No. 1 Aniotz, Monterey Co.	2-22- 9	2,410	hd. sd. drilling
Birch Oil Co., No. 1 Porterville, Tulare Co.	13-20-26	150	suspended
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17	721	land pipe
Shell, No. 1 Cowell, San Mateo Co.	8- 6- 6	3,750	hd. sd. drilling
Shell, No. 1 Murphy, Petaluma	29- 5- 6	5,470	hd. sd. drilling
Shell, No. 1 Ielmorini, Sonoma Co.	14- 5- 7	1,200	hd. sd. drilling
Thomas & Hammill, Well No. 1, Alameda Co.	16- 3- 3	1,122	hd. sd. drilling
Continental Oil Co., No. 1 Sargent, Santa Clara Co.	31-11- 4	.....	location

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	152,576	21,796	228,861	32,695	4,066,136	6,743,181
Fuel oil	70,678	10,097	78,453	11,208	4,360,632	2,939,030
Diesel and gas oil	.....	.....	67,438	9,634	1,613,369	1,327,460
Gasoline	74,192	10,599	.....	.....	3,807,798	3,247,772
Tops	.....	.....	.....	.....	.....	149,906
Coastwise—						
Crude oil	361,195	51,599	505,515	72,216	13,017,749	12,134,581
Fuel oil	307,074	43,868	73,289	10,470	5,743,765	4,477,131
Diesel and gas oil	14,356	2,051	.....	.....	149,508	125,672
Gasoline	345,439	49,348	239,221	34,174	4,333,487	3,450,421
Kerosene	1,355	193	2,098	300	56,598	138,950
Tops	.....	.....	62,570	8,939	62,570	341,139
Exports—						
Crude oil	.....	.....	126,330	18,047	1,526,359	1,947,605
Fuel oil	778,294	111,185	478,735	68,391	13,592,217	7,745,886
Diesel and gas oil	56,201	8,029	25,312	3,616	698,263	171,471
Gasoline	.....	.....	.....	.....	1,812,502	2,056,762
Tops	.....	.....	.....	.....	227,204	.....
Kerosene	96,647	13,807	72,609	10,373	1,186,400	1,181,888

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	90,053	12,865	505,608	790,778
Gasoline	78,095	11,156	.....	.....	1,039,676	608,848
Tops	.....	.....	.....	.....	.....	73,698
Lubricants	.....	.....	.....	.....	170,886	157,147
Coastwise—						
Fuel Oil	113,127	16,161	261,340	37,334	2,910,053	2,819,873
Diesel and gas oil	25,088	3,584	.....	.....	198,812	.....
Gasoline	197,031	28,147	147,505	21,072	2,501,731	2,158,243
Kerosene	.....	.....	12,337	1,763	111,120	193,946
Exports—						
Fuel oil	.....	.....	.....	.....	1,148,825	1,156,401
Gasoline	83,519	11,931	.....	.....	1,755,530	959,669
Kerosene	.....	.....	.....	.....	535,647	1,137,414
Lubricants	.....	.....	.....	.....	9,120	18,051

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WHITTIER CALIFORNIA OAKLAND

Indiana Producers Lead Central West

Gibson County Has 225-Bbl. Completion, Sullivan County 60 Bbls., Lawrence County, Illinois, 75 Bbls.

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 4.—Some very good wells are being found from time to time in the deep Clinton sand area of central Ohio, occasionally in southwestern Indiana and once in a while a well above the average is found in Illinois, but in the old Lima Fields wells of any size are a scarcity.

The best well for the week was found in southwestern Indiana, where Mann & Huber's test on the Hutchinson lease, Center Township, Gibson County, showed a natural flow of 225 bbls. the first day's output. It is in the same area that Joe S. Young, Jr., and others, during May brought in a 150-bbl. natural producer on the D. Jenkins lease, and two wells of the caliber of these are enough to bring about a little drilling campaign in that part of the Princeton Field. In the northern part of Fairbanks Township, Sullivan County, south of Terre Haute, and near the Vigo County line, a second well on the Thomas lease, is credited with an initial production of 60 bbls. This is on the farm which the high gravity crude was struck some months ago that caused a heavy leasing campaign.

A big gas well was struck on the Zeig property, in Strongville Township, Cuyahoga County, near Cleveland.

A 75-bbl. McCloskey sand well was struck in No. 18 Ross farm, in Petty Township, Lawrence County, Illinois, in old defined territory, the well being a natural flowing one. Lima Field wells were only average producers.

Lima Field

About the only excitement at this time in the old Lima Field of northwestern Ohio is centered on both oil and gas possibilities near the active little town of Forest in Hardin County, the field being right up to the town on the south and west; about 5 miles or so east of Dunkirn and approximately 7 miles northeast of Kenton. Possibly 50 or more wells have been drilled in what is known as the Forest Field which covers an area in Hardin County, eastern Hancock and Wyandott County, most of the wells being in Hardin County. It is a known fact that this field has produced natural gas continuously in commercial quantities for 35 years. The gas was there in such an abundance that one can remember when the users would open the windows to cool off, as the gas in those days was on the flat rate of $12 per year for heating stoves and $18 per year for cook stoves, but as a native says, those were the good old days of gas, never to come again. In 1903, a well was drilled on the Edward Young farm, in NE, Section 12, Jackson Township, Hardin County, that was a 10-bbl. producer. It was drilled by Eugene Williams, well known in oildom.

While the field has been producing gas steadily for many years little development in new wells has been made for many seasons and it was up to W. F. Kurts, a farmer near Forest, to start things going. His first well on his own farm, Section 19, Jackson Township, showed a pressure of 425 pounds and a volume of 2,600,000 feet of gas at a total depth of 1,301 feet. No. 1, also drilled by Mr. Kurtz, on the Christian Kraft farm, Section 19, was a failure at 1,324 feet, but this did not discourage the owner and No. 1 was drilled on the John Baker farm, which is a nice gasser at 1,301 feet, and he is now drilling No. 1 on the Laurence Deckelman 91 acres, Section 18, same township. John Hertzog & Son (the Forest Gas & Oil Co.) have purchased No. 1 from Mr. Kurtz and are using better than 1,000,000 cubic feet per day to run 10 lime-burning kilns and power for their plant and the well does not show any weakening at all. Numerous wells drilled in the field in years back showed volumes of from 5,000,000 to 10,000,000 feet. It is now oil that the vicinity wants, and the Forest Review has this to say: "All glory be to Mr. Kurtz. Forest is justly proud of Mr. Kurtz, and pays due respect to his business ability which cannot help pay him a profit in his new ventures. If his foresight shall lead to the full development of the mineral resources of Jackson Township, we will owe him as a community a lasting debt of gratitude and those of us that have always contended and had faith that Forest some day would put herself on the map in a big way, will have our faith justified. Our pearls (petroleum) have been hidden long enough and we believe Mr. Kurtz has pointed the way to bring them forth in all their glittering luster to enrich the citizens of this community."

Allen County

Northeast of Lima, in Bath Township, Allen County, C. A. Peavy's test, in the southeast corner of the C. M. Lenney farm, SW, Section 1, struck top of the Trenton at 1,315 feet and at 37 feet in the sand, got a well good for 15 bbls. initially. No. 2, same farm, is under way. In the same township, Section 11, Kelly Brothers are drilling a test on the Nancy J. Joseph farm. In Marion Township, same county, the Ohio Oil Co. has pulled out and abandoned Nos. 8, 9, 10, 12, 13 and 14 on the Judkins & Ford farm, Section 16.

In Perrysburg Township, Wood County, George L. Haubert and others' No. 2, on the Catherine Smith farm, Section 29, showed 20 bbls. the first 24 hours. In Middleton Township, W. T. Sullivan is drilling a test on his own farm, Section 21. In Liberty Township, in the heart of a one-time big producing area, the Ohio Oil Co. abandoned Nos. 1, 2, 3, 21, 25, 28, 30, 31, 32 and 33 on the W. A. Sargent farm, Section 12, and Nos. 1, 2 and 4 on the J. D. Mercer No. 2 farm, same section. In Henry Township, the same company abandoned Nos. 6, 8 and 12 on the Dave Fulton farm, and Nos. 7 and 9 on the Davis & Conroy farm, all in Section 14. Old timers back in the middle eighties will remember that the first oil well of note in Wood County, was No. 1 on the Dave Fulton farm, that produced 700 bbls. a day, and was the forerunner to the opening of one of the greatest fields of those days in the country, since which close to 20,000 wells have been sunk in this one county alone.

In Noble Township, Auglaize County, the Ohio Oil Co. abandoned No. 2 on the George Weadock farm, Section 31, which has produced for many years. G. S. Lacknett is drilling No. 2 on the J. Whitney farm, Section 10, same township. In Washington Township, the Brookside Oil & Gas Co. is drilling No. 5 on the F. H. W. Kuckerman farm, Section 29.

J. Parke Ludwig is drilling No. 8 on the A. C. Ludwig farm, Section 7, Jackson Township, Sandusky County. In Washington Township, the Home Banking Co. pulled out No. 2 on the J. F. Beeker farm, Section 8.

In Granville Township, Mercer County, the St. Marys Oil Co. is drilling a test on the Clem Evers farm, Section 20. In Union Township, Kuhns, Boyd and Stelzer abandoned old No. 1 on the W. F. Partner farm, Section 25. A. C. Grace is drilling No. 3 on the James Harner farm, Section 4, Center Township.

In the Tiffin Field, in Clinton Township, Seneca County, Shaul & Geiger are drilling No. 1 on the Charles Shaul farm, Section 17.

Southeast of Toledo, in Oregon Township, Lucas County, Joseph Casper abandoned Nos. 6 and 11 on the A. Chesbrough farm, Section 14. George E. Mong abandoned Nos. 1 and 2 Joseph Huffman farm; Nos. 1 and 2 Sarah Engle farm; Nos. 5 and 6 S. B. Tobias farm and No. 3 on the Thomas Garvey farm, all in Section 30.

J. G. Hoffman is drilling No. 7 on the H. W. Long farm, Section 16, Mississinewa Township, Darke County.

Central Ohio

Nine completions were reported from the Central Ohio Field, two being dry holes and six gas wells. The Empire Gas & Fuel Co. is drilling No. 6 on the Delpha Nethrow 162 acres, Lot 10, Hardy Township, Holmes County. East Ohio Gas Co. is drilling No. 4 John R. Hastings 35 acres, Lot 39, and No. 4 on the David R. Anderson 100 acres, Lot 24, same township. I. E. O'Hail is drilling a test in the northeast corner of the Julius Dete 783 acres, Lot 2, Richland Township, same county. Empire Gas & Fuel Co. is drilling a wildcat in the southwest corner of the John Bucklew 23 acres, Section 2, Mechanic Township, same county.

In Clay Township, Knox County, Bell Brothers' second test, 175 feet from the north line and 600 feet from the east line of the Leander Hayes 158 acres, Section 6, was dry in the Berea sand, as was their No. 2 well, 580 feet from the north line and 160 feet from the east line of the R. Elliott 100 acres, same lot. In Jefferson Township, same county, the East Ohio Gas Co. is drilling a test on the P. B. and M. Strobel 70 acres, Section 20. Ohio Fuel Gas Co. is drilling a test in the southeast corner of the C. M. Staats 60 acres, and made a location for a test 450 feet from the north line and 1,100 feet from the west line of the J. A. Spring 57 acres, Lot 35.

The Logan Gas Co. is drilling a test on the George Wilson 27 acres, Section 19, Hanover Township, Ashland County. Same company is starting a second test 660 feet from the north line and 680 feet from the east line of the Charles Brown 80 acres, Section 12, Clear Creek Township, same county. No. 1 in the northwest corner of the same farm, came in an excellent gas well.

In Lafayette Township, Medina County, the Empire Gas & Fuel Co. brought in a nice gas well in No. 3 on the Charles H. Puchhas 90 acres, Lot 36.

An average gas well was drilled by the Ohio Gas Co. in No. 3 in the northeast corner of the Catherine Funk 152 acres, Section 1, Chester Township, Wayne County. Brenner & Brenner drilled a light gas well in a test in the northwest corner of the S. A. Swanson 100 acres, Section 16, Congress Township, same county.

In Carthage Township, Athens County, the Logan Gas Co. got an average gas producer at No. 3 in the southeast corner of the S. A. Wilson 55 acres, Lot 17, and drilling No. 5 on the J. N. Barnhill 81 acres, Lot 31.

Dillon & McFrederick brought in a fine gas well in a test 1,500 feet from the south line and 300 feet from the east line of the George Zeig 50 acres,

(Continued on Page 92)

SIXTY WELLS IN MICHIGAN FIELD; DEEPER DUNDEE SAND BEING TESTED

By Whit
Staff Correspondent, Michigan Fields

SAGINAW, Mich., July 1.—Active development work is maintained in the Saginaw Field and there are reported that 60 drilling wells are under way within the borders of the Wolverine State, 51 of which are in Saginaw County. There were nine new completions announced for the week, eight of which are in the Saginaw Field proper to the north and northwest of the city and one to the south in Birch Run Township.

The Birch Run Township well of W. E. Ellis and others on the Edward Kobs farm, 1½ miles south of the town of Frankenmuth and 1 mile southeast of Birch Run, topped the Berea sand at 1,672 feet and found 29 feet of that sand, with a dose of water at 25 feet in. This sand was cased off and drilled to the Saginaw sand which was found at 2,125 feet and at 14 feet in found a nice gas sand and it was given a shot. A slight increase was shown from the shot, but the prospects are not very good for oil. This well is in Section 3, to the southeast several miles from Saginaw City. Between Birch Run and Blackmar, the well of Johnson and others that failed to find showings in either the Berea or Saginaw sands, struck the top of the Dundee sand at 2,570 feet. A showing of oil was found at 15 feet in that formation, but at last account the well had gone 95 feet into the Dundee, without any improvement in the oil showings, and was still drilling. Northeast of Birch Run, the test of the B. & B. Petroleum Co., on the Pat Sauve farm, got the top of the Dundee at 2,515 feet, getting a pay sand at 35 feet in the Dundee and went to a total depth of 2,640 feet or 90 feet in the Dundee. Nothing has been done yet with this venture and its value as a producer is unknown.

Drilled to Deep Dundee

Results of the shooting of the Wayco Oil Producing Co.'s No. 2 on the Braun property, north of Weiss Street and east of Eddy Street, is still uncertain on account of a considerable amount of caving in the hole which it was thought prevented the flow of oil, or the filling of oil. A liner has been set and the well cleaned out. This well was drilled to the deep Dundee sand, although it would have made a good producer in the Berea sand but was dry in the Saginaw sand. The Berea was cased off and if the Dundee does not prove a well, it will be plugged back to the upper Berea sand.

The first well to be drilled south of Genesee Avenue, on the east side of the Saginaw River, has been brought in by Morley Brothers on their property between Genesee and Federal Avenues. Top of Berea was found at 1,803 feet and drilled 20 feet in the sand and shot and estimated at 30 bbls. or better initial.

Fordney Petroleum Co.'s well on the Greencorn property on North Bond Street, got the top of the Berea at 1,816 feet and drilled 14 feet in the sand and was shot, with good results, indicating a 20-bbl. producer. Same company's No. 1 on the Seymour property on Oakley Street is also showing for 20 bbls. in the

(Continued on Page 68)

Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) Etc.

Beaumont Iron Works Co.
Dreadnaught Rotary Equipment, Water-Cooled Draw Works, Pumping Hoists, Traveling Blocks, Etc.

Carbic Manufacturing Co.
Acetylene Gas Generators and Welding Equipment.

Donovan Boiler Works
Oil Country Boilers and Tanks.

Frick-Reid Service Belting
Rubber Covered and Friction Surface.

Jensen Bros. Mfg. Co.
Pumping Jacks.

National Transit Pump and Machine Co.
Power and Steam Pumps.

J. P. Ratigan
Grips, Clamps, Beam Hangers.

Joseph Reid Gas Engine Co.
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

Rossendale Reddaway Belting & Hose Co.
"Camel Hair" Belting, Belt Clamps.

Whitlock Cordage Co.
Manila Cordage, Bull Ropes and Cat Lines.

Lapweld and Seamless Tubular Goods

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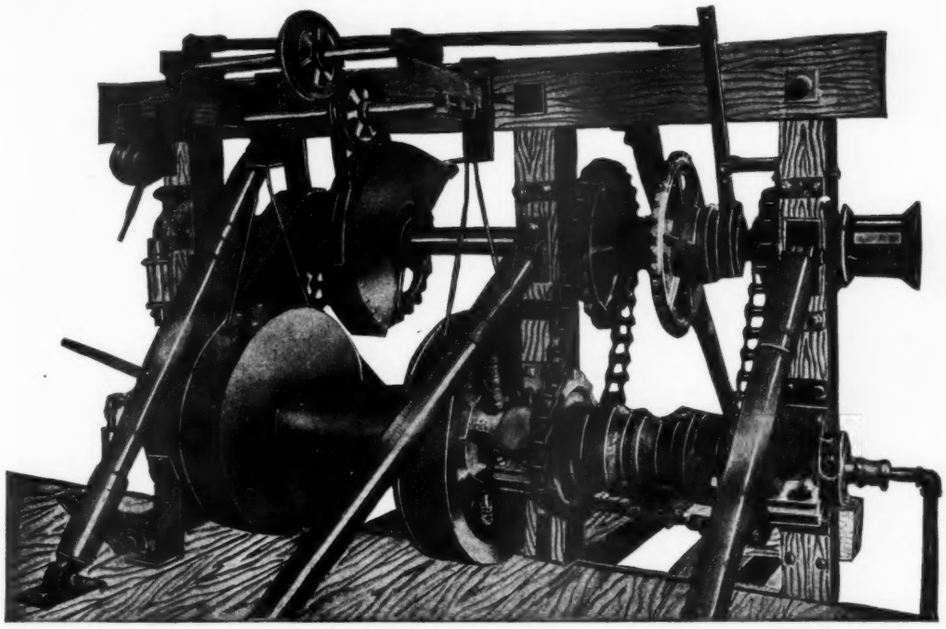
Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.



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Only Light Wells in Eastern Fields

Even Southeast Ohio Had a Bad Week in Number of Completions and Average Size of Producers

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., July 4.—The close of the month will show fewer wells completed and less new production than in the preceding month. Many of the old districts report no wells drilling or starting. In a number of districts drilling down old wells, rather than starting new, is a good deal of a feature. Operators are not inclined to abandon a well until after it has been drilled through all sands and found barren.

At present there is no known producing territory that has not been developed. Even if there was, operators would not push operations when the market is as low as at this time. Operators owning light wells are keeping them running and not a few are not making more than expenses. As for drilling or starting test wells, there is nothing doing in that line, except on farms in defined territory. Operators have grown tired of paying rental on territory not known to be productive. There are no large areas that have not been tested.

From the beginning to the close of the week nothing better than light wells were completed. Southeast Ohio had a bad week both in the number of wells completed and average size. When the deep sand territory fails to complete any good producers there is not much chance for anything better than light pumpers in other sections.

West Virginia

On McFarlan Creek, Murphy district, Ritchie County, West Virginia, Hays & Co. have completed in the Berea grit a test on the B. B. Nutter farm, dry in all sands. In Jefferson district, Pleasants County, the Amber Oil Co.'s No. 5 on the Calvin Templeton farm is a duster in the Big Injun sand.

In Coal Township, Harrison County, the Washington Gas Co. has started to drill deeper its old No. 1 on the E. D. Fittro farm. In Liberty Township, Marshall County, the Manufacturers Light & Heat Co. has made the location for a second test on the L. and J. R. Anderson farm. In the same district, the Denver Oil & Gas Co. has a rig up on the Margaret Campbell heirs' farm. The Lynn Camp Oil & Gas Co. has made a location for a test on the Thomas Blake farm. In Mannington district, Marion County, the Delmar Oil Co. is drilling on the Anna Palmer farm.

In Henry district, Clay County, the Virginian Gasoline & Oil Co. has completed No. 17 on the Lockhart tract, good for 10 bbls. The Hope Construction & Refining Co.'s test on the Neil Bradley farm in Murphy district, Ritchie County, is good for 8 bbls. a day in the Maxon and Squaw sands. In Troy district, Gilmer County, the Carnegie Natural Gas Co. has a gasser in the Big Injun sand at a test on the A. R. Brake farm.

Nay & Nintzer have a gasser in the Maxon sand at a second test on the F. W. Waldo farm in Central district, Doddridge County. In the same district, the Loyd Oil & Gas Co. is drilling a second test on the Roy Ingram farm. In Grant district, Ritchie County, Henegan & Hanlon have a duster at a test on the William Vincent farm.

On Mudlick Run of Leatherbarl Creek, Big Sandy district, Kanawha County, the United Fuel Gas Co. completed No. 7 on the Osborne farm. It is a gasser in the Big Injun sand good for 250,000 feet. On Dry Ridge, Grant district, Ritchie County, J. G. Charter and others have drilled their test from the salt to the Big Injun sand. The well produced 57 bbls. the first 24 hours.

On the right fork of Breden Creek, Harvey district, Mingo County, the Public Gas Corp. has drilled deeper into the Maxon sand its No. 9 Henry Closterman estate and increased its production to 1,000,000 feet of gas. On Big Root Creek, Sheridan district, Calhoun County, W. H. Bickel & Co.'s test on the R. A. Ferrell farm is a gasser.

Boone County

In Crook district, Boone County, Godfrey L. Cabot has completed No. 3 on the E. M. Arbogast farm. It is good for 500,000 feet of gas. In the same district, the United Fuel Gas Co.'s No. 6 on the Horse Creek Coal & Land Co.'s tract is a fair gasser. In Union district, Harrison County, Benjamin Bowmans has completed a test on the Emma Holden farm. It is a gasser in the Speechley sand.

In Liberty district, Marshall County, the Decem Development Co. drilled No. 5 on the Robert Bonar farm into the Gordon sand. The hole filled up 2,500 feet the first 24 hours. It will make a fair producer. In the same district, the Cameron Heat & Light Co. drilled deeper its test on the Lindley Strickland farm. It is a duster.

In Sheridan district, Calhoun County, Martin Crawley has drilled deeper an old well on the B. C. McNanaway farm and dry. In Mannington district, Marion County, the Hope Natural Gas Co. has drilled deeper No. 3 on the C. J. Cunningham farm. It has a light show of oil.

In Grant district, Ritchie County, Ira D. Cox has the rig completed for a second test on the D. J. Richards farm. In New Milton district, Doddridge County, J. E. Trainer has started to drill on the Lewis Maxwell farm. The Murphy Oil Co. is drilling on the Edward Maxwell farm.

Cabell County

In Grant district, Cabell County, the Aetna Oil & Gas Co. is building a rig on the Herbert Hatfield farm. In McComas district, the Commercial Gas Co. is building a rig on the J. M. Nicely farm. In Barboursville district, Ortman & Shipe have started to drill on the G. W. Linthcom farm. In Union district, Lincoln County, Roy & McComas have shut down at a test on the Randolph Sias farm.

In Sherman district, Boone County, the Pure Oil Co. has completed in the Berea grit No. 18 on the Lafollette, Robson & Pricherd tract B. It is a gasser good for 94,560 feet. In the same district, the same company has completed a second test on the L. Sutphin farm. It is a gasser good for 325,000 feet. In Peytonia district the Owens Bottle & Machine Co. has a gasser at No. 10 on the Bull Creek Coal & Land Co. tract. In Clay district, Wetzel County, the Philadelphia Oil Co.'s second test on the J. J. Ferrell & Co.'s farm is a light pumper in the Gordon sand. The Rico Oil & Gas Co. is drilling on the Bradford farm in Grant district, Ritchie County. In Murphy district, Ross & Co. are drilling a test on the Bradford farm.

In DeKalb district, Gilmer County, S. G. Roberts & Co. have a gasser on the Dosia Bell farm. In the same district, the South Penn Oil Co.'s test on the D. S. Holbert farm is a duster in the Big Injun sand. The same company has a rig up for a test on the George Ellison farm. In Central district, Doddridge County, the Parkersburg Oil & Gas Co. has started to drill a test, the second, on the Leroy Ingram farm. In Grant district, Ritchie County, the Junior Oil Co. has shut down at a test on the Hickman heirs' farm.

In Henry district, Clay County, the Virginian Gasoline & Oil Co. has completed No. 12 on the Lockhart tract. It is not good for more than 5 bbls. a day in the Big Injun sand. In the same district the South Penn Oil Co.'s No. 12 on R. S. Kyle No. 2 farm and has a like pumper. In the same district, the Ohio Fuel Oil Co.'s test on the P. and M. E. Reed farm is a gasser in the Big Injun sand good for 250,000 feet.

Duster in Pleasants County

In Grant district, Pleasants County, George Pickins and others have completed in the Big Injun sand a test on the Hammett heirs' farm. It is a duster. In Geary district, Roane County, Noble Beatty completed No. 3 on the Fredrick Smith farm. It is a gasser in the Big Injun sand good for 250,000 feet.

The Mellon Oil Co.'s test on the Rachel Cain farm in Grant district, Ritchie County, is a gasser in the salt sand. In the same district, Marsh & Lynch's No. 4 on the Cornelia Storrs farm is dry and abandoned. In Grant district, Pleasants County, James Smith & Co. have drilled their test on the William McTaggart farm through the Berea grit and dry. It has been abandoned. In Jefferson district, Ralston & Morrison have a 6-bbl. pumper in the salt sand at a test on the Robert Ingram farm.

Dusters in Wood County

In the Plum Run Pool, Williams district, Wood County, Smith & Goldish have completed in the first Cow Run sand No. 3 on the Smith-Goldish farm. It is a duster. On Big Run, same district, Reed, Athey & Grant have a duster in the salt sand at a test on the Charles Varner farm. In Walker district, Forrest Cline's second test on the J. W. Goodwin lot is a near duster in the Maxon sand.

In Walton district, Roane County, E. C. Dillard and others have completed in the Big Injun sand a test on the Elizabeth Humphreys farm. It is a gasser, good for 150,000 feet, and producing 3 bbls. of oil a day. In Sherman district, Boone County, the Pure Oil Co.'s Nos. 11, 19 and 20, on the Federal Coal Co.'s property, are gassers in the Berea grit. They average about 400,000 feet. In the same district, the same company's No. 28, on the Lafollette, Robinson & Prichard tract, is a gasser in the same formation.

In Battelle district, Monongalia County, the Manufacturers Light & Heat Co. has a rig up on the A. Whistler farm. In the same district, Bell Brothers have shut down at 3,650 feet on the J. M. Linning farm. Patterson & McCracken are drilling on the W. F. Taylor farm. In Paw Paw district, Marion County, the Hope Natural gas Co. is still fishing on the Rebecca Tennant farm. In Mannington district, C. A. Snodgrass is drilling out a bailer at No. 2 on the Absolam Holbert farm. In the same district, the Hope Natural Gas Co. is drilling to the lower sands a test on the James H. Furbee farm.

Drilling Tests

On the north fork of Hughes River, Grant district, Ritchie County, the Hope Construction & Refining Co. has the rig completed for a test on the James Cain farm. The rig for No. 2 is building. In the same district, the Continental Oil Co. has made the location for a second test on the N. T. Mason farm. In the same district, McDonald & Deem are rigging up on the R. Swisher farm. In Grant district, Pleasants County, Sherman Pickners & Co. are drilling on the G. S. Hammett farm.

(Continued on Page 92)

AMBROSE POOL STILL MOST ACTIVE AREA IN THE KENTUCKY DISTRICTS

By Whit
Staff Correspondent, Kentucky-Tennessee

WHITESVILLE, Ky., July 2.—Were it not for the Ohio County development the review of the Kentucky fields would be rather slim in the way of production, as all wells of note are credited to that one area for the past several days. The leading producer there was found on the J. R. Weller farm, in the Ambrose Pool, with a production of 200 bbls., and another for 150 bbls., being Nos. 17 and 18 on the 110-acre lease.

Ohio County is looking more interesting to trade every day, with the recent bringing in of producing wells in various directions from production. West some distance from the Ambrose Pool a wildcat on the Bartlett farm, near Union Grove Church, is reported with an initial showing of 60 bbls., and if it is an extension to the west of the big pool, it may mean that much of the intervening territory may be prolific. To the southeast, about 4 miles or so from the Ambrose Pool, on the south side of Rough River, near Sunnydale, another well is in the sand on the Wilson farm, showing for 60 bbls. The territory just north of good production does not look very enticing, as a well drilled on the Sinnett farm was dry in the Jett sand; also a dry hole is reported on the Wiley Colyer farm, also north and east of the Sinnett farm, a duster.

The bringing in of what is reported a showing for 75 bbls., on the John M. Miles farm, in Daviess County, may bring about a more active development in that county.

Allen, Cumberland, Monroe and Clinton Counties in the western division and the entire eastern division are in the wake of the heavy storms, which have caused the failure to report any new completions for some days, as it has been impossible to get around through the hills on account of high waters. It will take weeks for that section of the state to recover, and the same applies to Tennessee.

Week's Work

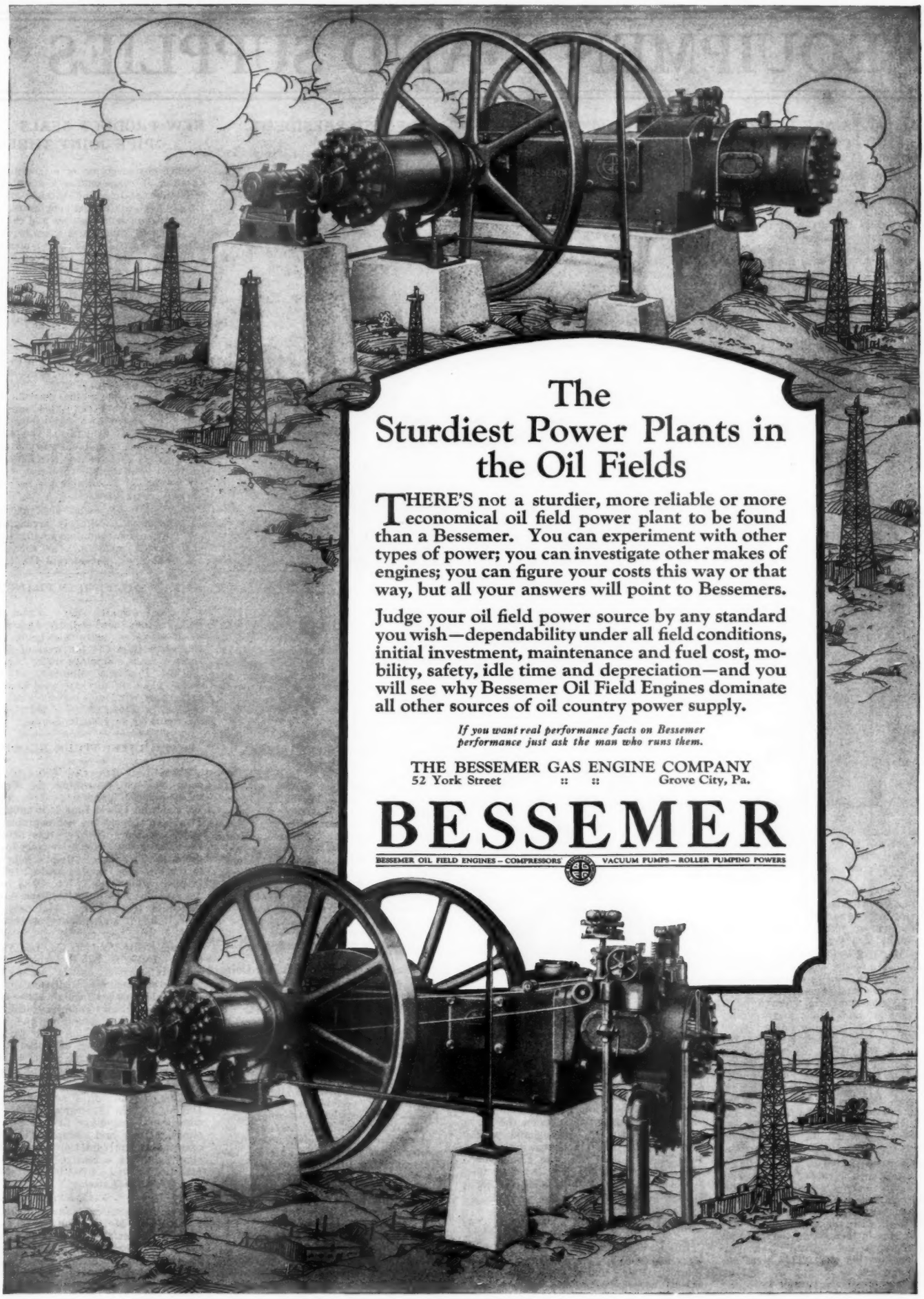
A summary of the week's work in the Kentucky-Florida fields shows 16 completions, 12 producers with an initial production of 775 bbls., 3 dry holes, and 1 gas well. When compared with the previous week there were 1 more completion, same number of producers, 177 bbls. less production, same number of dry holes and 1 more gas well. The wells were distributed by counties and districts as follows:

County—	Comp.	Oil Wells	Prod.	Dry	Gas
Ohio	7	6	620	2	0
Barren	3	3	37	0	0
Daviess	1	1	75	0	0
Johnson-Magoffin	2	2	25	0	0
Warren	1	1	18	0	0
Floyd-Knott	1	0	0	0	1
Kentucky	15	12	775	2	1
Florida, Glades Co.	1	0	1	1	0
Total	16	12	775	3	1
Last week	15	12	952	3	0
Difference	1	0	177	0	1

Florida

Word comes from Florida that the well drilled by McCurdy and others on the Brewton property, in Section 13-39-32 of Glades County, is reported as a dry hole.

(Continued on Page 95)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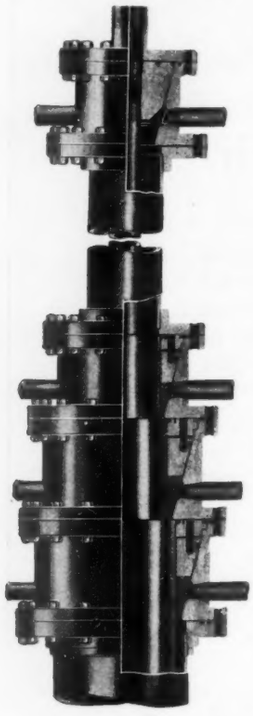
EQUIPMENT AND SUPPLIES

ADVANTAGES ARE LISTED FOR NEW CONTROL HEAD

The U-S control head, manufactured by the U-S Tool Co., Long Beach, Calif., for flanging together strings of well casing has simplified the operation and is claimed to eliminate many of the difficulties encountered today. Among the advantages listed by the manufacture are: All pipe threads, with the exception of the thread of the bottom flange on the surface string, have been eliminated. No special length nipples are required, no joints of casing to be backed off, no



crushed collars to contend with, no crossed threads to give trouble, no slack strings, no tension to pull on casing that is always attended with uncertainties of parting the casing and dangers to the lives of the men on the rig. All operations in flanging are done above the last string of casing set, so that every operation is in an accessible position and can be easily inspected.

With the U-S control head the only threaded joint is the bottom flange that is screwed on the string of surface casing, or if stove pipe is used for the surface string the flange is screwed on a nipple that is welded to the stove pipe. On this flange is bolted a flanged spool fitted with a set of long slips for the next size casing. When the casing is set at the desired place the slips are placed in the spool and the casing held securely. As the casing is not disturbed after cementing, it has the correct tension, secured by the casing hanging free from the slips in the control head. After cementing, the casing is not disturbed so that it retains its natural and correct tension.

A split flange bolted to the top flange of the spool with a rubber packing ring pack off the casing for cementing. After cement has set, the packing ring and split flange are removed and the casing cut off flush with the top flange of the spool. A ring is then set in the spool on top of the slips and the end of the casing welded to this ring. This gives additional support for casing as well as forming a groove for a ring of hydraulic packing making the joint gas tight.

CLEVELAND REPRESENTATIVE

M. S. Maleson, 442 Rockefeller Building, Cleveland, Ohio, has been appointed exclusive sales representative in the Cleveland territory which includes a large section of northern Ohio. Mr. Maleson has an able organization and users of Homestead products will be served promptly. Fred W. Layman who was formerly in charge of the Cleveland district sales is now covering the far western states in behalf of the company.

FOOS ENGINE COMPANY CHOSEN AS NEW NAME

At the meeting of the board of directors of the Foos Gas Engine Co. of Springfield, Ohio, J. F. Baker was elected president and M. E. Baker, secretary-treasurer. Ray C. Burrus has been appointed sales manager, W. W. Schettler, chief engineer, and George F. Noltein, mechanical engineer. Further, is was decided to change the name to "The Foos Engine Co."

The new program of the company includes the establishment of a factory branch at Tulsa, Okla. In addition to carrying a large stock of engine parts at the Tulsa branch, for the service of Foos engine users in the Southwest, the branch staff will include sales representatives and service engineers.

The Pacific Coast representatives, Garvey & Palmer, Inc., have practically completed the organization of that territory, having established offices in Los Angeles and San Francisco, Calif., and Seattle, Wash.; both the marine and stationary fields being handled. The Foos company has just rounded out 40 years' activity in the design and manufacture of internal combustion engines.

The Type L Foos Diesel, the lightweight, high-speed engine, announced a year ago, is reported meeting an increasingly wide aceptance in mobile, semi-mobile, stationary and marine installations.

AUTOMATIC PIPE CUTTER SIMPLE OF CONSTRUCTION

The new "Toledo" automatic pipe cutter for cutting 2 to 4-inch pipe, is a remarkable pipe tool, according to its manufacturers, The Toledo Pipe Threading

Machine Co., of Toledo, Ohio. It weighs but 65 pounds, is simple in construction, easy to operate and handle. It cuts smoothly, and leaves a straight square end cut with no inside burr. The outside edge is neatly chamfered, making it easy to start the threading dies on the pipe. The knives are fed automatically, requiring no attention on the part of the operator. A single hand wheel sets them for cutting, or the quick return of the knives after the pipe is cut off. There is but one jaw to center the tool on the pipe, and it holds the tool true and rigid.

MOVES TULSA OFFICES

Union Wire Rope Co., Kansas City, Mo., has moved general offices to 720 Kennedy Bldg., Tulsa, Okla. The new offices were opened for business on June 27.

ELECTED PRESIDENT

W. F. Graver, for many years vice president and treasurer of the Graver Corp., was elected president of the company at a recent meeting. Other officers elected were: P. S. Graver, first vice

W. F. Graver

president; J. P. Graver, second vice president; K. W. Bartlett, third vice president; H. S. Graver, secretary; and A. E. Lucius, assistant secretary. J. P. Graver, who has long been in charge of the business as president, gave over the reins to his brother, but still remains active as a vice president.

P. S. Graver is in charge of manufacturing operations and sales.

SALES REPRESENTATIVES

The Buffalo Meter Co. of Buffalo, N. Y., manufacturers of disc meters for oil, gasoline, water and other liquids, have recently appointed Westcott & Greis, Inc., as sales representatives in Los Angeles and southern California. Westcott and Greis are also handling the products of the Buffalo Meter Co. at their Tulsa, Okla., and Dallas, Tex., offices. The products of the Buffalo Meter Co. are widely known under their trade name of "Niagara" and "American" given to their meters.

THRIFT CORPORATION

The annual meeting of the Thrift Corp. resulted in the election of the following officers at Houston, Tex.: President, C. H. Lane; vice president and general manager, A. L. Volmer; secretary and treasurer E. A. Hawe. The company manufactures a hydraulic casing pulling machine and other hydraulic oil fields equipment.

WAUKESHA MOTOR EARNINGS

The directors of the Waukesha Motor Co., of Waukesha, Wis., met and declared regular quarterly dividend of 62½ cents per share, payable on July 1. The net earnings for 10 months of the fiscal year, before adjustment for income tax, are $796,855.82. Orders on hand for June and July are largest in the history of the company.

ENLARGED PLANT

The Peer Bolted Steel Tank Co. of Houston, Tex., representing the Maloney Tank Manufacturing Co. of Tulsa, Okla., has enlarged its Houston plant.

NEW PRODUCT SEALS PIPE JOINT THREADS

Since the inception of oil refining the question of compounding a suitable material for sealing the threads of pipe joints has confronted engineers. The wide range of temperatures and the varying kinds of liquids and gases carried in the lines have formed a complexity of conditions testing the resourcefulness of engineers both within and outside the industry. Interest, therefore, is attached to the announcement of The Alloys Co. regarding the compounding of metallic base elements for use in forming tight, leakproof closures.

A powdered metallic lead has been devised, carried in a vehicle to give it the consistency of very heavy paint suitable for application with a brush. This compound, according to the manufacturers, after application packs into a solid mass under pressure in a pipe joint which still can be taken apart. The mixture is said to be insoluble in acid, gas, oil or gasoline and has the desirable peculiarity of increasing in volume on heating so that it is suitable for use on hot oil and steam lines.

The Alloys Co., with headquarters in San Francisco, Calif., is arranging for distribution by sampling among the gas and refining industry. The company is a subsidiary of The Merrill Co.

NEW OIL FIND IN FRANCE

A Paris dispatch says: From Saint-Boil, in the Saone-et-Loire Department, comes news of petroleum being found. Engineers from the far west of France, Nantes, made soundings under the direction of Professor Moineau, of Paris, whose name is already well known in connection with such work, which have resulted in strong traces of petroleum being found at very slight depths.

TRADE LITERATURE RECEIVED

From Link-Belt Co., Chicago, Ill., book No. 630 describing the Caldwell speed reducer manufactured by the H. W. Caldwell Co., a Link-Belt subsidiary. The speed reducer is a self-contained unit which combines two separate drives; a Link-Belt silent chain drive from the high speed shaft, and a cut spur gear drive to the low speed shaft; made in sizes to furnish ratios from 7:1 to 40:1 in type A or to 30:1 in type B. Type A is designed for general industrial uses while type B is for screw conveyor service.

From Celite Products Co., Los Angeles, Calif., Bulletin 325-B, which affords much information on the use of Celite in concrete, including a discussion of the use of this product where water-cement ratio is specified. There is considerable data of general interest on the subject of concrete construction with particular reference to the effect of workability on the uniformity, strength, water-tightness, permanence and appearance of concrete.

From the Dayton Pipe Coupling Co., Dayton, O., new illustrated catalog, which describes its complete line of pipe couplings, fittings and clamps. The catalog contains several interior views of the plant, showing extensive manufacturing facilities as well as the large stocks carried of standard sizes.

From the Butler Manufacturing Co., Kansas City, Mo., catalog No. 99 entitled "Oil Field Tanks," which is just off the press. The catalog lists, with complete descriptions, the Butler line of bolted tanks, welded field tanks, tool boxes and tool houses. There are many excellent illustrations.

LESS COST PER B·T·U·TRANSFERRED

Efficient design and arrangement of heat transfer surfaces in BRAUN Heat Exchangers means lower first cost and operating expense and at no sacrifice of safety factors and operating and cleaning features

C·F·BRAUN & CO.

Manufacturing Mechanical Engineers

ALHAMBRA, CALIFORNIA

TULSA • DALLAS • NEW YORK

MEN KNOWN IN OILDOM

Samuel W. Meals

Samuel W. Meals, president of the Carnegie Natural Gas Company, and vice president of the Natural Gas Association of America, is one of the best known and most popular officials in the natural gas business. He was born March 31, 1869, at Callansburg, Clarion County, Pennsylvania, and attended Callansburg Academy and the Clarion State Normal School. He taught for three terms of school in Clarion County before starting work in the oil fields.

Mr. Meals was employed on an oil lease for Allen & Cochran at Allentown, N. Y., in 1888, and was employed by Joseph Hartman, Sr., at Jefferson City, Butler County, Pennsylvania, in 1890. On March 1, 1892, he started work for the South Penn Oil Company at Mannington, W. Va., filling various positions in the field until he was made superintendent of the Nineveh district which included a large part of Greene County, Pennsylvania, and parts of Marion, Monongalia and Wetzel Counties, West Virginia. He left the South Penn, August 1, 1902, to become a partner of the Reese & Heasley Drilling Company with offices at Waynesburg, Pa., and upon the dissolution of this partnership, February 1, 1904, he was made superintendent of the West Virginia fields for the Carnegie Natural Gas Company, with headquarters at Moundsville.

Mr. Meals was transferred to Pittsburgh, Pa., January 1, 1918, as general superintendent and was made vice president and general manager January 1, 1919, and became president of the company, November 1, 1921. He was president of the Pennsylvania Oil & Gas Men's Association in 1926, and had been a director of the Natural Gas Association of America from 1925 until elected vice president of that organization at the recent convention in Cincinnati, Ohio.

PERSONAL PARAGRAPHS

W. K. Warren, president of the Warren Petroleum Company, is spending a month in Minnesota.

* * *

J. R. McCaldin, who has been in West Texas for some weeks, has returned to San Antonio, Tex.

* * *

During the past week F. G. Rappoport sailed from London for Venezuela, where he will continue his activities for the British Controlled Oilfields, Ltd.

* * *

Sheldon Hardin, president of the Southern Pipe Line Company, of Sherveport, La., has been in the West Texas fields looking over properties of his company there.

Starr Pope, scout for the Gulf Producing Company, at Laredo, Tex., is sick in a Dallas, Tex., hospital.

* * *

K. J. Willis, factory representative for Franklin Valveless Engine Company, is on a trip through Southwest Texas.

* * *

Joe Shuster, of the firm of Shuster Brothers, oil producers in the Salt Creek Field, was a recent Casper, Wyo., visitor.

* * *

Ted Wetherill, son of Ira G. Wetherill, visited Casper, Wyo., recently as representative of the Ellis Manufacturing Company.

* * *

A. F. Whiting, treasurer of the Louisiana Oil Refining Corporation, of Shreveport, La., has returned from a trip to Boston, Mass.

* * *

D. S. Brooks, president of the Root Refineries, Inc., of Shreveport, La., has returned from a week's business trip to New York City.

* * *

M. J. Grogan, vice president of the Louisiana Oil Refining Corporation, of Shreveport, La., is in New York City on a short business trip.

* * *

A. L. Pollard, credit manager of the Louisiana Oil Refining Corporation, of Shreveport, La., is spending a vacation in West Texas.

* * *

A. J. Coyle, of the Coyle-Concord Company, who has been spending quite a little time in West Texas is back at the offices in San Antonio, Tex.

* * *

John Edwards, of the Paragon Refining Company, Toledo, Ohio, spent a few days in Cincinnati, Ohio, and other points in the interest of his company.

* * *

F. E. Wilkerson, manager of agency sales of the Louisiana Oil Refining Corporation, of Shreveport, La., has returned from a trip to Memphis, Tenn.

* * *

Earl B. Renolds has returned to San Antonio, Tex., from a month's stay in New York City, where he completed the organization of the Reynosa Oil Corporation.

* * *

H. V. DeRousse, manager of the tool department of the Oil Well Supply Company, Pittsburgh, Pa., spent some time looking over the Saginaw Field, in Michigan.

* * *

A. M. Bowman, general purchasing agent of the Humble Oil & Refining Company, Houston, Tex., has returned to his duties after a prolonged trip north and east.

* * *

G. B. Gierhardt, geologist for the Humble Oil & Refining Company, with offices in Laredo, Tex., has left to spend his vacation with his parents at Shamrock, Tex.

* * *

J. K. Kerr, of Marshall, Ill., vice president of the Ohio Oil Company, has returned to his home after spending a short time at the Shreveport, La., offices of the company.

* * *

Mr. and Mrs. W. L. Mallory, of San Antonio, Tex., have left for Tampico, Mexico, where Mr. Mallory is in the oil business. En route they stopped in Laredo, Tex.

* * *

Fred Miles, well known operator of Lexington, Ky., has been looking over the results of the drill in the fields comprising Daviess, Ohio and Hancock Counties, in western Kentucky.

* * *

M. A. Tracey, manager of taxes and insurance of the Louisiana Oil Refining Corporation, of Shreveport, La., is in Cincinnati, Ohio, in connection with business concerning the Ohio division of the company. A. D. Gaston, chief engineer of the refining department, has just returned from Cincinnati.

* * *

B. A. Lindsay, representative of the Hope Engineering & Supply Company, of Mount Vernon, Ohio, has been in Shreveport, La., in connection with the gas line which his company is to lay from the Waskom gas field to Port Arthur and Houston, Tex., for the Dixie Pipe Line Company.

Scott Turner, head of the Bureau of Mines, inspected the Government's helium plant at Fort Worth, Tex., in the course of a routine visit to a number of the bureau's properties.

* * *

W. J. Lloyd and R. G. Carpenter, of the United States Geological Survey, are making headquarters at Tucumcari, N. Mex., while securing data for a topographical map of the section from Vaughn to Bryantine.

* * *

R. E. Wertz, head of the Producers & Refiners Corporation, was a business visitor in Casper, Wyo., recently. Mr. Wertz was accompanied by Mr. Satori, superintendent of refineries for the Producers & Refiners.

* * *

L. M. McKinney, assistant advertising manager of the Louisiana Oil Refining Corporation, of Shreveport, La., has been transferred to Cincinnati, Ohio, and placed in charge of advertising for the company in the Ohio division.

* * *

Bonneau Peters, chief scout, and Mr. Stathers, geologist, of the Standard Oil Company of Louisiana at Shreveport, La., have returned from an automobile trip to Mississippi where they studied oil and gas possibilities in that State.

* * *

F. J. Spang, vice president of Spang & Company, and his family recently visited in Tulsa, Okla., at the home of W. L. Walker. They were en route to Butler, Pa., after a trip through Wyoming, Colorado, Texas and Oklahoma oil fields.

* * *

R. S. Mosher has left for the South American fields in the interest of Axelson Machine Company. He plans to remain in the South for several months. Clyde Ellwood, general sales manager, made an extensive trip through South American fields last fall.

* * *

J. P. Sutton, assistant treasurer of the Ohio Oil Company with headquarters at Findlay, Ohio, spent a short time at the Shreveport, La., offices of the company on his way from Illinois to Oklahoma. He has supervision of industrial relations of the company's employes.

* * *

Mr. and Mrs. James K. Kerr, of Marshall, Ill., returned from New Rochelle, N. Y., from where their daughter, Miss Margaret Kerr, graduated. Miss Kerr returned home with her parents. Mr. Kerr is vice president of the Ohio Oil Company, and well known in all producing fields of the country.

* * *

Homer Darlington, chemist and refinery engineer, returned to Casper, Wyo., after an extended trip through the eastern states. Mr. Darlington is now associated with Schuster Brothers, oil producers in the Salt Creek Field and will have charge of the refinery the Schuster Brothers are considering placing there.

* * *

George H. Speary, a former official of The Texas Company's pipe line department and later of the White Oil Corporation, has returned to his home in Houston, Tex., after a three week's trip to the Panhandle and West Texas fields making a survey of the situation. Mr. Speary was active as a contractor during the boom days of the Smackover Field.

* * *

Miss Jeanne Livingston, a recent graduate of the Colorado State University at Boulder, Colo., in the School of Geology, is now with the Producers & Refiners Corporation with headquarters at Parco, Wyo., as assistant geologist. Miss Livingston is the second young woman to commence life work as a geologist with the oil companies in Wyoming. Miss Afton Seal, now Mrs. Leslie, assistant geologist for the Ohio Oil Company, being the first.

* * *

Allison & Fitzwilliams, drilling contractors of Wichita, Kans., state they have no intention of deserting the Sunflower State as reported recently on authority of some Haskell County, Texas, operators where Allison & Fitzwilliams are drilling a wildcat test. They also state they are drilling this test for themselves and not for the Western Exploration Company, as reported, although the latter concern has some interest in it.

Effective July 11th
1927, the Hughes Tool
Company announces
a reduction in prices
on all Tool Joints

Natural Gas Developments

NEW GAS PIPE LINES IN NORTHERN TEXAS

DALLAS, Tex., July 2.—Two major gas trunk line projects in northern Texas are nearing completion.

Magnolia Gas Co., of Dallas, will place its 210-mile telescopic line from the northeastern Louisiana fields to Fort Worth, Tex., in service within the week. The line was constructed with 12, 14, 16 and 18-inch diameter pipe and cost between $25,000 and $30,000 per mile. Welding the line was completed June 1 and 15 days later all of the testing was disposed of. Meters are being installed now and all connections were made by July 1, when the line was placed in service.

The line will serve industrial users in Fort Worth and Dallas, and supply gas to distributing companies to a few towns along the right of way of the line. Completion of the line marks the completion of the Magnolia company's second telescopic line from the Louisiana fields. The first was built three years ago to Beaumont, Tex.

To augment the present gas supply which is coming from the Waskom and Sarepta fields in Louisiana, the Magnolia company has completed a 12¾-inch line from Sarepta to Carterville, a distance of 12 miles. This new and short line opens a market for the big gas wells discovered near Carterville a few months ago.

At Sarepta, the Magnolia company is building a six-unit compressor station.

The second line nearing completion is that of the Lone Star Gas Co., Dallas. That line runs from Petrolia in Clay County to the Panhandle gas area in Wheeler County. The line is an 18-inch combination screw and welded line. Part of the line is in use at present. It ties into the Lone Star company's trunk line system at Petrolia.

Through recent purchases and expansion the Lone Star is probably the largest of major gas companies. Recently the Lone Star purchased the Municipal Gas Co. of Dallas, which was the distributing company for 18 cities and town in Central and North Central Texas. At present the Lone Star company's trunk line system is being extended with a 24-mile 8-inch line from Waco to Marlin and with a 41-mile 16-inch line from Waco to Temple. It is rumored the Lone Star company plans to build a trunk line on in to Austin, Tex., which is approximately 65 miles from Temple.

WOOD COUNTY, OHIO, LINE

FINDLAY, Ohio, July 2. — Through the efforts of M. P. Colt of Lima, Ohio, a former resident of the eastern part of Wood County, Ohio, in connection with J. A. Mahan, also of Lima, negotiations have been completed for the purchase of a 4-inch line from Mermill and Rudolph into Bradner and Wayne, which will connect with the main line of the Northwestern Ohio Gas Co. about a mile east of the Dixie Highway. The council of Wayne voted to grant a 5-year franchise to Mr. Colt's company, the Auditor Gas Co., to furnish gas for these three communities, Wayne, Bradner and Rising Sun.

It is expected that gas will be available to all consumers about August 1. The gas company will complete the pipe lines and installing lines within the towns.

REGAUGING MONROE FIELD

MONROE, La., July 2.—Regauging of gas in the Monroe Field, comprising Morehouse, Ouachita and Union Parishes has been started under the supervision of the Louisiana Department of Conservation. Regauging is undertaken semi-annually. This time it will require about 60 days.

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Production and Engineering Field Reports

The Prevention of Waste of Oil and Gas from Flowing Wells in California

(Continued on Page 96)

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GAS REFRIGERATORS IN APARTMENT HOUSE

NEW YORK, July 2.—The first apartment or appartment hotel to be completed equipped with gas-fired refrigerators is under construction in New York City and will be ready for occupancy this fall, according to an announcement by the Consolidated Gas Co.

The 22-story Lombardy, on Fifty-sixth Street, near Park Avenue, will have more than 150 individual gas-fired refrigerating units, housed in specially designed refrigerators varying in size to meet the needs of different apartment suites.

The new type of gas-fired refrigerator is a nontechnical device, operated by a single gas flame which causes the evaporation of a liquid. This absorbs heat during evaporation, and is recondensed in a sealed compartment. This feature makes recharging unnecessary.

BUILDING KENTUCKY GAS LINE

BOWLING GREEN, Ky., July 2.—While work is well in progress on the new gas line of the Petroleum Exploration Co., from its extensive holdings in Lee-Owsley Counties to Lexington, Ky., this company is starting another line to handle its gas in the more eastern or southeastern part of the state. This new line will be built from the company's gas well on the North Jellico Coal Co.'s lands in the Indian Creek Dome in Knox County. The new line will extend to Barbourville, where gas will be sold to the local plant, which has used gas from the Cumberland River Field for more than 20 years. The company's second well on this same tract proved a dry hole, the initial well being the gas producer. The Petroleum Exploration Co. will further develop the Indian Creek structure by drilling additional wells for both oil and gas.

GAS FOR TESTING MOTORS

Seven of the larger automobile factories are now using more than 25,000,000 cubic feet of manufactured gas monthly for testing the wear in motors.

GAS COURSES OFFERED AT SEVERAL COLLEGES

Ohio State University is one of many higher institutions of learning which is offering courses in gas engineering. A recent announcement by the American Gas Association says that colleges and universities throughout the country are looking with increasing favor upon the gas industry. Among other leading institutions which have such courses are: Johns Hopkins, University of Michigan, University of Wisconsin, University of Illinois and University of Louisville.

The home study course on manufactured gas conducted at Columbia University, now has an enrollment of more than 1,000 students. Fuel engineering courses are offered at the Massachusetts Institute of Technology, and the University of Pennsylvania, while short courses in the use of gas for industrial operations also are given at the Massachusetts Institute of Technology, and the University of Illinois. Other courses covering the gas meter, utility accounting and economics, are offered at 15 colleges and universities.

LONE STAR GAS LINE PROMISED SAN ANGELO

SAN ANGELO, Tex., July 2. — The Lone Star Gas Co. is coming into San Angelo and work will be started immediately on a $2,000,000 line from the Coleman and Brown County fields. The company has signed a five-year contract with the West Texas Utilities Co. to serve that company's plant here with gas, effective January 1, 1928. Engineers are now working on the survey to bring the pipe line from the gas fields in Coleman and Brown Counties.

This is the message brought E. V. Spence, city manager, by L. B. Denning, president; F. L. Chase, vice president and operating manager, and Chester L. May, superintendent of distribution of the Lone Star Gas Co., in asking that the city of San Angelo grant it a permit to do business.

BUYS CEDAR GROVE SYSTEM

SHREVEPORT, La., July 2.—The Marshall Natural Gas Co., recently acquired from The Texas Company by the Moody-Seagraves interests of Houston and Galveston, Tex., who organized the Dixie Gas & Utilities Co., has taken over the Texas Pipe Line Co.'s distributing system and business in Cedar Grove, a suburb of Shreveport. The Cedar Grove system was another acquisition by the Dixie company.

SOUTH BEND CARBON PLANT

A carbon black plant is to be established in the South Bend oil field, 10 miles from Graham, Tex., soon if the railroad commission of Texas grants application of the Roxana Petroleum Corp. to establish the industry.

GAS FOR OKLAHOMA TOWNS

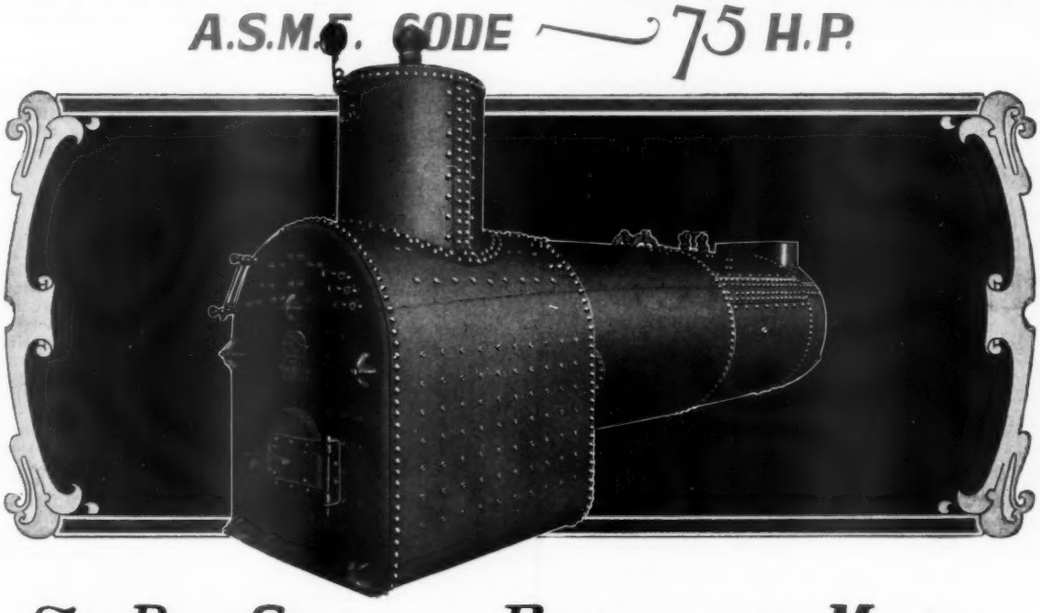
Pauls Valley, Okla., at a special election, voted a 25-year gas franchise to the Walter H. Gant Corp. of Oklahoma City. Purcell, Davis and Sulphur also held elections, granting a like franchise. The Gant Corp. obligated itself to pipe gas within 90 days from date of franchise.

IS THE KANSAS-TEXAS CO.

TOPEKA, Kans., July 2.—The Kansas-Texas Co., a Henry L. Doherty corporation, Monday applied to the Public Service Commission for permission to construct a pipe line for bringing natural gas to Kansas from fields near Amarillo.

ACME OIL WELL BOILERS

A.S.M.E. CODE — 75 H.P.



The Best Steaming Boiler on the Market

Acme Oil Well Boilers are built in strict accordance with the ASME Code and under the direct supervision of a resident Hartford Inspector, and are tested and stamped by this inspector before shipment.

The Boilers are designed to give a very high ratio of grate surface and heating surface, based on the rated horse power.

Illustration shows the 75 H.P. 175-lb. Pressure Code Boiler which size is very popular today on deep drilling. We can offer immediate factory shipment as well as deliveries from our store stocks of this size. Other sizes and pressures from 25 H.P. to 100 H.P. complete this line.

The material has been figured to give a large margin of factor of safety over the minimum Code requirements.

Handholes are provided at convenient location for inspection and cleaning the interior of the Boilers.

The Fittings regularly furnished with the Boilers are of the highest grade, and the entire unit is of best quality of workmanship and highest grade material.

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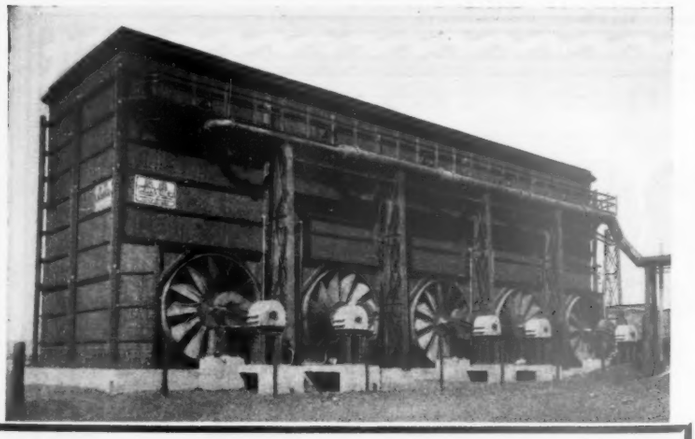

Plentiful Cooling Water

THE capacity of the tower shown above, installed in Oklahoma, is 8700 gals. per min. of water from 101.8° F. to 85° F. when the outside air is 90° F. and 50% humidity. The use of fans to supply the draft for the tower puts every factor under control and provides a flexible installation which will always supply the rated amount of cool water under all wind conditions. All the factors are under the immediate control of the designer of the tower, so that any capacity and cooling range may be attained.

Forced draft towers can be built in any size in a single unit and occupy less ground space than any other water cooling means.

Write the Wheeler Condenser & Engineering Co. for information concerning the forced draft cooling tower, giving details as to the quantity of water to be cooled and atmospheric conditions. Wheeler towers are also made in the atmospheric and natural draft types.

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WHEELER OIL REFINERY EQUIPMENT

HEAT EXCHANGERS
(Liquid to Liquid)
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FINAL CONDENSERS
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PARTIAL CONDENSERS
THERMO COMPRESSORS

OTHER PRODUCTS INCLUDE:

Cooling Towers
Surface Condensers
Steam Jet Air Pumps
Expansion Joints
Heaters
Evaporators
Centrifugal Pumps
Brass and Copper Tube and Pipe

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STANDARD PIPE DEMAND KEEPS UP; PRICES BEING STRICTLY MAINTAINED

By B. E. V. Luty

PITTSBURGH, Pa., July 4.—Demand for standard pipe keeps up pretty steadily, there being no appreciable decrease in the past week or two. Demand for casing and other well material is, if anything, even lighter than it was a fortnight or a month ago. There has been no line pipe business of consequence since the orders reported three weeks ago, 100 miles of 16-inch and 60 miles of 10¾-inch, placed with the National Tube Co., together with something like 300 miles of 22-inch to be made by a Milwaukee concern by welding. All this is understood to be for a gas line to run south to New Orleans. The Amarillo-Denver line is reported still up in the air. Altogether there has not been much line pipe business placed in the past three months or so. Last October, and for some time thereafter, there was a great deal, but not much business is now left on books.

Pipe mills are now running at rather a low rate, probably under 65 per cent. It is the common talk in the trade now that there is too much capacity, in both butt weld and lap weld, on account of the new construction since 1923. In butt weld the general demand grows very slowly, while in oil country goods seamless has been getting into such vogue that it would require more increase than can be expected in the total to give any gain to the welded. There have been various seamless producers for a long time. Withing the past couple of years the National Tube Co. replaced some welding capacity at the Lorain works by seamless while the Youngstown Sheet & Tube Co. has lately completed a seamless department. Some of the other welded pipe mills are likely eventually to build seamless works.

Prices at Pipe Mills

Prices at pipe mills are reported to be very strictly maintained all along the line, producers recognizing that there is a fair distribution of such business as there is and that cutting prices would not increase the volume of demand but would rather disturb things.

The volume of steel demand in general decreased very gently, almost imperceptibly, during April and May, but there was a more distinct decrease in the fore part of June and in the second half of the month there was more or less of a slump, whereby practically all along the line orders have been decidedly light in the past week, making what may be called without any exaggeration a dull market.

Mill operations have decreased sharply. They were at slightly above 90 per cent in March and averaged about 84 per cent in May. June opened at fully 80 per cent and closed at under 70 per cent. There are chances of an upturn in buying in the next few weeks, but otherwise a rate below 65 per cent is likely to be struck, which would be decidedly under the rate of last July and even under the rate of December, which was below that of July.

Steel Mill Operation

There are no specific reasons to account of the decrease in steel demand. Nearly all lines have tapered off. Generally speaking it is said that this is seasonal, but that does not account for mill operations being below that of a year ago, when last March was a little more active than the preceding March. Fabricated structural steel business ran heavier in the first four months of the year than in the same period last year, but lettings of fabricated work since May 1 have been considerably under those at the same time last year. The automobile industry as a whole is running quite slack, that being due chiefly to Model T being discontinued, making way for the new model which may not get into production for a month or more. Freight car buying has been light since January, when there was a good run of business for a single month.

Finished steel prices have shown a little easing off in spots but there is nothing like a general decline in any line. Plates, shapes and bars are easier east of Pittsburgh. Sheets and strips are holding perfectly according to all accounts, and wire mills are trying to get prices back to the level of last February.

Valley foundry iron is off 50 cents, at $18, Bessemer and basic remaining at $19 and $18 respectively. Connellsville coke is dull, but a shade firmer.

MICHIGAN FIELDS

(Continued from Page 58)

Berea, while No. 3 on the Ace Park Ball Grounds swabbed 40 bbls. the first 24 hours from the Berea sand. Sand was topped in this well at 1,800 feet and drilled 20 feet in the sand and given an 80-quart shot.

The Saginaw Prospecting Co.'s No. 1 on the Eddy Estate, on Davenport Street, near the Pere Marquette freight office, is reported as a 30-bbl. initial producer. Same company's No. 4 on the George Deindorfer property, on Hermansau Road near Weiss Street, is an average producer with an initial of 20 bbls. Same company's No. 3 on the Mershon Vinyard property on Hermansau and Madison Streets, found top of Berea at 1,815 feet and went 19 feet in the sand and was a 20-bbl. initial producer after given a shot.

Schwinck Oil Co.'s No. 3 on the Schwinck Packing House property on the Carrollton Road, near the foot of Weiss Street, got top of Berea at 1,805 feet and at 20 feet in the sand shows for 20 bbls. initial.

Nearing Pay Sand

Schust and others' No. 1 on the Schust property at the foot of Irving Avenue, is due for completion within a few days. Another well nearing sand is Sam Lande's No. 1 on the Riser property at Benjamine and Deindorfer Streets.

The well of Wickes Brothers on their own property on the river bank north of Carroll Street cased at 1,480 feet and soon will drill in the Berea.

Fordney Petroleum Co.'s well on North Fayette Street, between Davenport and Cronk Streets, is getting close to the Berea. Same company is down close to 1,000 feet at No. 1 on the Eastwood Glass Co.'s property on the east side of Water Street, between Fitzhugh and Carroll Streets.

William M. Bradley and Son are on top the Berea at No. 1 on the Henning Sausage Co.'s property, foot of Fitzhugh Street, on the east bank of the river.

The Sun Oil Co.'s No. 4 on the John Stelzreide farm, Section 11, Saginaw Township, is due in the Berea sand. This company got a slight oil showing at 33 feet in the Dundee formation, the top of the Dundee found at 2,941 feet and still drilling.

Saginaw Prospecting Co.'s No. 1 on the Eddy estate property, at the foot of Fitzhugh Street, on the east side of the river, is close to the sand.

Field Pickups

The Standard Oil Co. of Indiana is putting in a gathering line in the Saginaw Field to the site of its new refining plant to be constructed at Zilwaukee, some few miles north of Saginaw.

A string of 1,660 feet of casing has been set in the No. 2 on the Courtney farm, southeast of Birch Run, in Birch Run Township, southeast of Saginaw, by the Wolohan Petroleum Co. This was formerly reported as drilling by R. L. Hill and others. Top of Berea was found at 1,535 feet, but reported at a depth around 1,750 feet, going to the Saginaw sand, and possibly may go to the deeper Dundee.

The Bliss Petroleum Co. that has a bad fishing job at its No. 2 on the Fred Engel farm, in the western part of the field, has raised the tools 45 feet off the bottom. This well was drilled to the Dundee sand and the tools were lost after shooting,

(Continued on Page 72)

BAKER

There is "that something" in all Baker Tools, resulting from exactly correct design and precision manufacture, the importance of which only the inventive genius of the originator of these devices has fully recognized and appreciated. The effect of this knowledge is only apparent in results in actual service. It is the difference between one hundred per cent performance and mediocrity. Specify Genuine Baker Tools and Be Safe.

Baker Cable Tool Core Barrel

Baker Standard Core Barrel

The recovery of highly informative cores in any formation, under all conditions and at all depths is an every day routine matter with the Baker Cable Tool Core Drill. "Highest average of core recovered in relation to feet cored" is the report of all users. Its construction is simple - - - its successful operation within the ability of your regular crew.

Baker Core Barrel Tongs

The setting up of joints in the Baker Cable Tool Core Barrel is an important factor in its successful operation, and because its dimensions differ from the various sizes of pipe, tubing and casing, we have developed a special tong for setting up these joints. The tong is of steel, designed for use with the floor circle and jack, amply strong for the purpose intended and will not crush or injure the barrel.

Baker Hydraulic Core Extractor

A new Baker development for use wherever force is required to remove core from the barrel of a Baker Cable Tool Core Barrel or one of any other type. The device comprises a two-stage pump fitted with a sub connection, one end of which fits the pump and the other one the core tube containing the core. The construction is very simple and the entire device has been thoroughly tested out in service.

Write for the Baker Catalog as well as special literature explaining the construction and operation of the Baker Hydraulic Core Extractor, The Baker Tongs, and the Baker Core Barrel.

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Baker Core Barrel Tongs.

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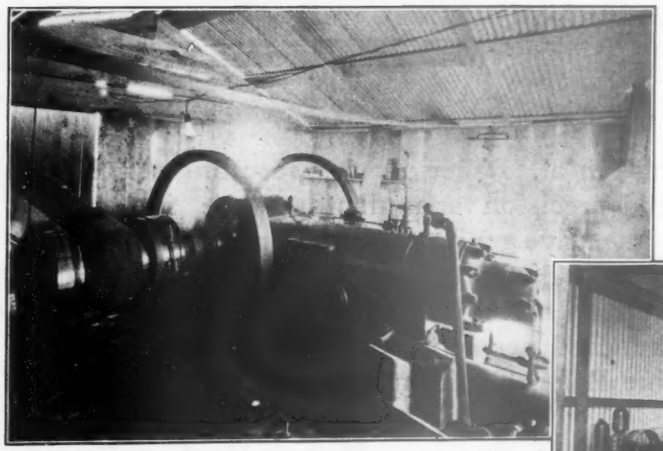
For Any Job



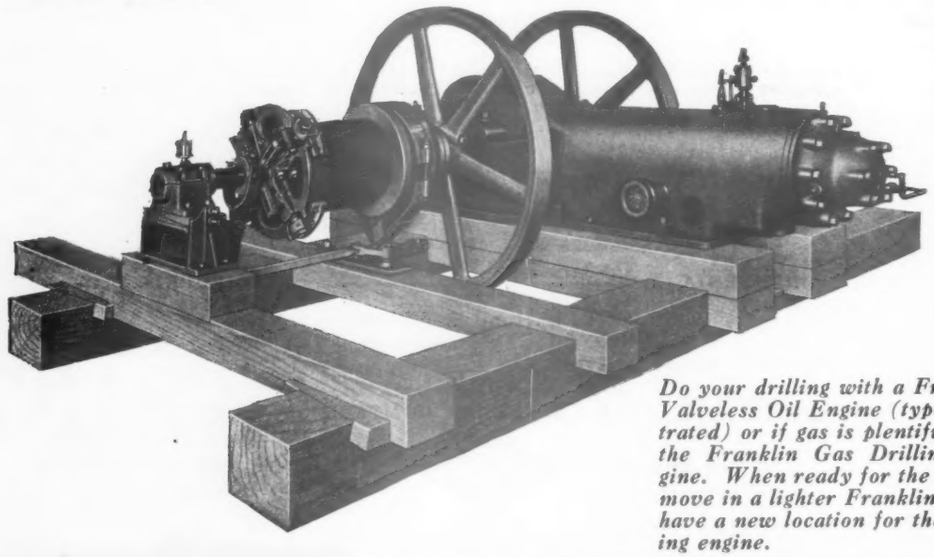
Two of the Franklin Valveless Drilling Engines on location at McCamey, Texas. Gibson Brothers, the Drilling Contractors, have four Franklins in service at McCamey. State they have given wonderful service and expect to buy more.

Drilling

If it's speed and economy you're after, take a tip from veteran contractors and hitch your tools to a Franklin Valveless.

This dependable, flexible power plant is making a name for itself and a reputation for its users in every worth while field. By *speed* we don't mean number of revolutions per minute, but one-truck transportation, easy installation, quick starting and absolute dependability month after month with the least amount of attention. Those are the advantages that *count,* whether you're contractor, superintendent or owner.

As for expenses—a Franklin Valveless (oil or gas) costs less to run than a flivver, and repair costs aren't worth mentioning.

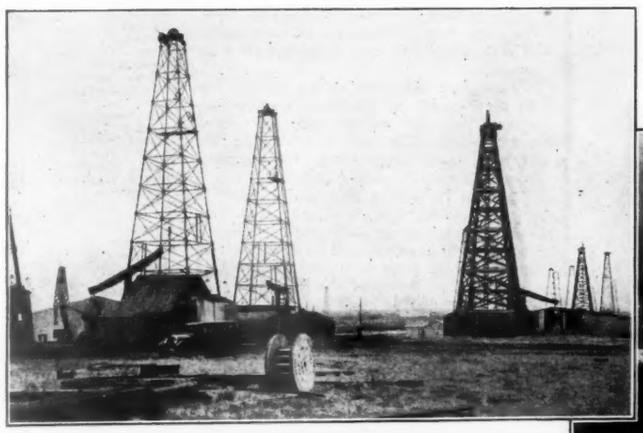


Do your drilling with a Franklin Valveless Oil Engine (type illustrated) or if gas is plentiful with the Franklin Gas Drilling Engine. When ready for the pumps move in a lighter Franklin if you have a new location for the drilling engine.

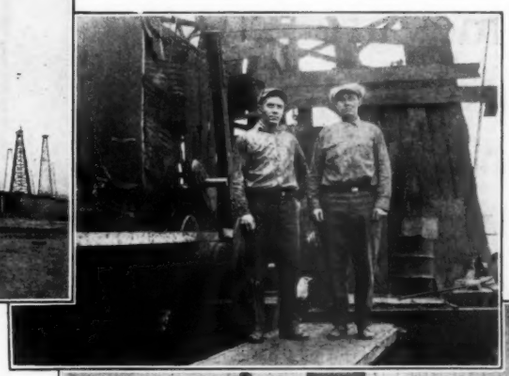
FRANKLIN VALVE

Oil Well Supply Company.

In Any Field



T. B. Slick—Endicott Lease, Tonkawa, Okla. Seven Franklins in service.



J. R. Lawson—Tool dresser
W. C. Milam—Driller
on Endicott 2 E Well.

Pumping

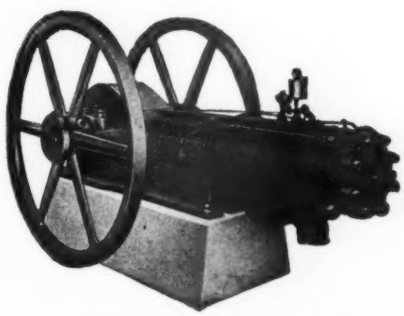
When T. B. Slick of Tonkawa, Okla., was through drilling, he found it economical to transfer those power plants to new locations and replace them with light Franklin Gas Pumping Engines. The pumpers were installed right on the old foundations without so much as changing a single bolt hole!

T. B. Simmons, Tool dresser, and Geo. I Miller, Driller, with 40 H.P. Franklin Gas Engine.

Swabbing

Just because Franklin Pumping Engines are light and economical, don't get the idea that they aren't powerful. T. B. Slick, whose lease and crews are shown above, has seven 40 H.P. Franklins in this field, and four of them have been used continuously on swabbing jobs for the past year. Mr. Slick reports—"no trouble, no repairs to date."

FRANKLIN VALVELESS
ENGINE COMPANY
Franklin, Penna.



PUMPING ENGINES

25-30 H.P. and 40 H.P. Franklin Gas Engines are ideal for pumping and powerful enough to stand up under swabbing. These engines can each be mounted on the same block as the Drilling Engine without so much as changing a bolt.

LESS ENGINES

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Whether
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booming
or quiet,
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GROWING TAXATION ON GASOLINE NOW OBVIOUSLY OUT OF LINE

By L. M. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

Approached from the angle of its relationship to the total cost, the gasoline taxes and inspection fees paid by the motorist in the different states is obviously out of line.

Attempting to average this cost over the whole country is to get into the realm of estimation, but in a general way it is possible.

Last year the gasoline tax rate in the 44 states and the District of Columbia where gasoline taxes were in effect amounted to 2.38 cents a gallon on the average, and represented an increase from 2.26 cents a gallon in 1925.

Adding inspection fees, the amount is slightly raised, and it is estimated that at the present time 2.75 cents represents the average amount paid by the motorist in taxes and inspection fees in the majority of the states of the Union.

Splitting up the costs that go into the price of a gallon of gasoline, it is found that the motorist is paying in gasoline taxes and inspection fees short of half a cent of the cost of the crude oil from which the gasoline is derived. In other words, the tax has grown until it is approaching, on the basis of present crude prices, a parity with the raw material.

Refining Cost Less Than Tax

The cost of refining, entering the price of gasoline, is lower on an average than the taxes the motorist has to pay.

In other words, taxes, which are looked upon lightly by the average motorist, are actually adding to his gasoline cost to an extent to compare with other major factors of cost.

Automobilists last year paid a total of $187,603,000 in state gasoline taxes, as compared with $146,029,000 the previous year and $79,734,000 in 1924.

With relation to the total retail cost of gasoline to the motorist the tax last year probably ranged from 12 to 15 per cent.

It is indicated that the motorist paid on an average $10.74 last year in gasoline taxes. This is based on a registration of 17,473,851 motor vehicles in the states having taxes, and a total tax of $187,603,231.

The tax rates vary from 1 cent to 5 cents a gallon, and in the states where the higher rates prevail the motorist obviously is paying a proportionately higher percentage in taxes to other costs entering into the money he spends for gasoline at the filling station.

In Arkansas there is a 4-cent tax. It is indicated that the motorist last year paid $17.12 in taxes. Florida has a 4-cent tax and here the indicated tax per motor vehicle last year is $28.47, but entering into this is the factor that a large number of cars registered elsewhere consumed gasoline in Florida and helped the tax.

Kentucky has a 5-cent tax and the average total tax per car last year is indicated at $17.53. The Mississippi motorist, paying a tax of 4 cents a gallon on his gasoline, paid on an average a total tax of $19.92. North Carolina, with a tax of 4 cents a gallon, cost its motorists on an average $20.22 per car in gasoline taxes.

Another high tax state is South Carolina, with a 5-cent tax. The indicated total tax cost per car in that State is $24.82.

The following table indicates the average gasoline taxes per car paid in the various states:

AVERAGE GASOLINE TAXES PER CAR

	Number of cars registered Dec. 31, '26	Gasoline tax 1926	Aver. annual tax per car
Alabama	225,930	2,558,651	11.33
Arizona	73,682	978,264	13.28
Arkansas	209,419	3,585,304	17.12
California	1,600,475	16,502,123	10.31
Colorado	248,613	2,091,749	8.41
Connecticut	263,235	2,689,372	10.22
Delaware	44,834	390,414	8.71
Florida	401,562	11,431,486	28.47
Georgia	277,468	653,140	2.35
Idaho	94,760	122,217	1.29
Indiana	772,326	8,971,741	11.62
Iowa	698,998	4,842,427	6.93
Kansas	491,276	4,303,388	8.76
Kentucky	281,557	4,935,078	17.53
Louisiana	239,500	2,708,567	11.31
Maine	151,486	1,823,346	12.04
Maryland	252,852	2,293,854	9.07
Michigan	1,118,785	10,081,776	9.01
Minnesota	630,285	4,804,688	7.62
Mississippi	205,200	4,088,206	19.92
Missouri	654,554	5,661,145	8.65
Montana	103,958	807,712	7.77
Nebraska	366,773	3,039,927	8.29
Nevada	24,014	405,818	16.90
New Hampshire	89,001	768,582	8.64
New Mexico	54,996	762,851	13.87
North Carolina	385,047	7,786,473	20.22
North Dakota	157,822	988,493	6.26
Ohio	1,480,246	13,257,266	8.96
Oklahoma	499,936	6,212,409	12.43
Oregon	233,568	3,333,829	14.27
Pennsylvania	1,455,184	11,781,782	8.10
Rhode Island	110,746	511,856	4.62
South Carolina	181,189	4,496,968	24.82
South Dakota	168,230	1,924,758	11.44
Tennessee	279,639	3,852,524	13.78
Texas	1,049,869	5,226,886	4.98
Utah	85,380	1,258,009	14.73
Vermont	74,063	553,093	7.47
Virginia	322,614	5,855,670	18.15
Washington	363,279	3,482,093	9.59
West Virginia	227,836	2,922,675	12.83
Wisconsin	662,282	5,209,805	7.87
Wyoming	49,883	568,589	11.40
Dist. Columbia	111,497	1,015,193	9.11
Total	17,473,851	187,603,231	10.74

CHANGES IN STOCKS DURING MONTH OF MAY

Gasoline stocks decreased 2,232,000 bbls., according to the American Petroleum Institute's summary for the month of May of the increases and decreases in stocks at refineries covering approximately 88 per cent of the operating capacity east of California. The following table shows the stock changes of all products (in barrels of 42 gallons):

	Increase	Decrease
Domestic crude oil	.....	2,993,000
Foreign crude oil	578,000	.....
Gasoline	.....	2,232,000
Kerosene	154,000	.....
Gas and fuel oils	2,135,000	.....
Lubricating oil	55,000	.....
Miscellaneous	.....	530,000
Total	2,922,000	5,755,000
Deduct	.....	2,922,000
Net decrease	.....	2,833,000

Pipe line and tank farm gross domestic crude oil stocks east of the Rocky Mountains increased 9,497,000 bbls. in the month of May.

MICHIGAN FIELDS

(Continued from Page 68)

then attempting to clean out, according to late advice.

Jack Hendricks and others have started a well on the Campau property, on the west bank of the Saginaw River, just south of the Grand Trunk bridge.

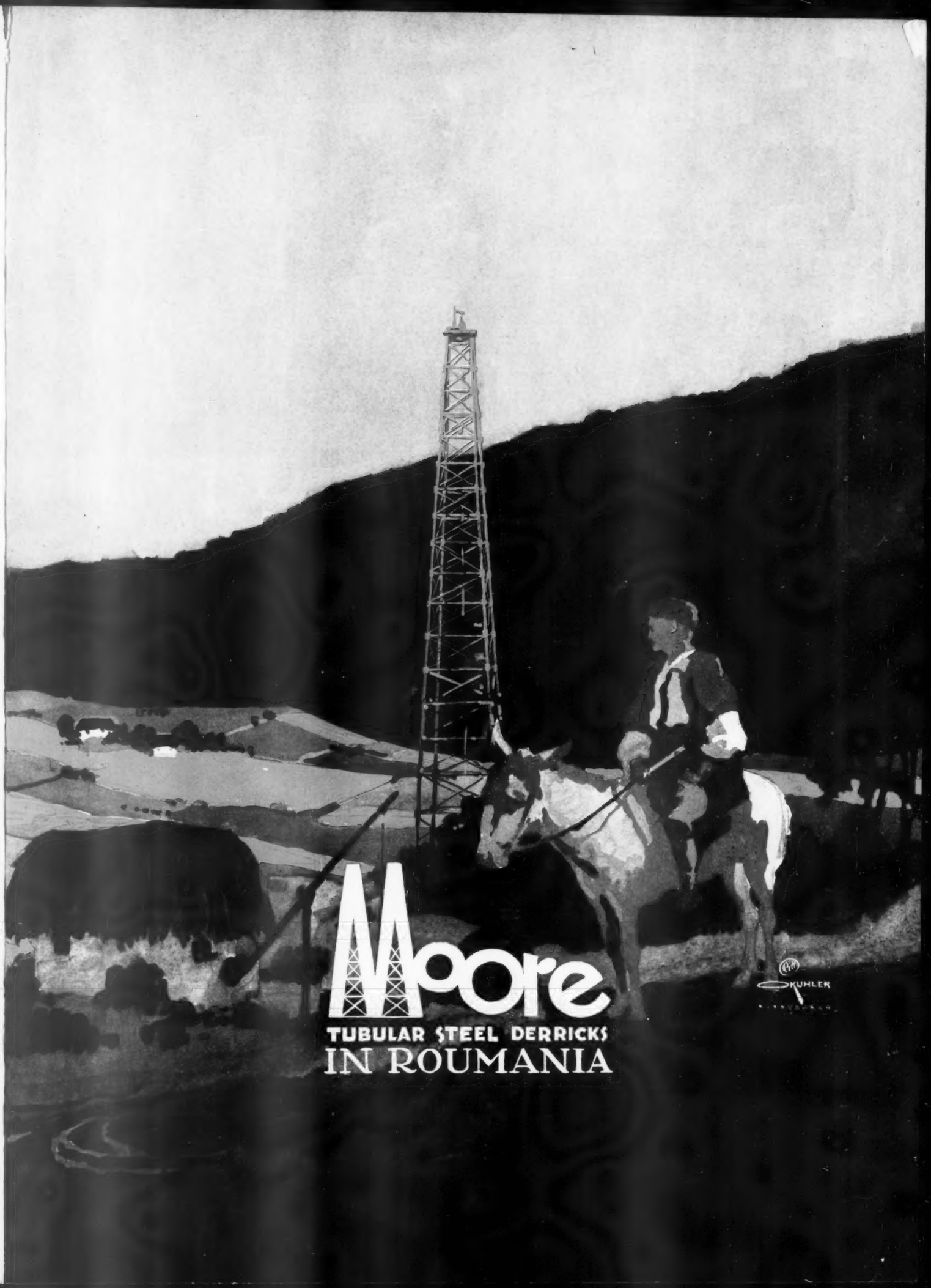
Articles of incorporation for the Wolohan Petroleum Co. have been filed with the Secretary of State. Charles Wolohan of Birch Run and Carl E. Macomber and James I. Bearinger of Saginaw are listed as incorporators.

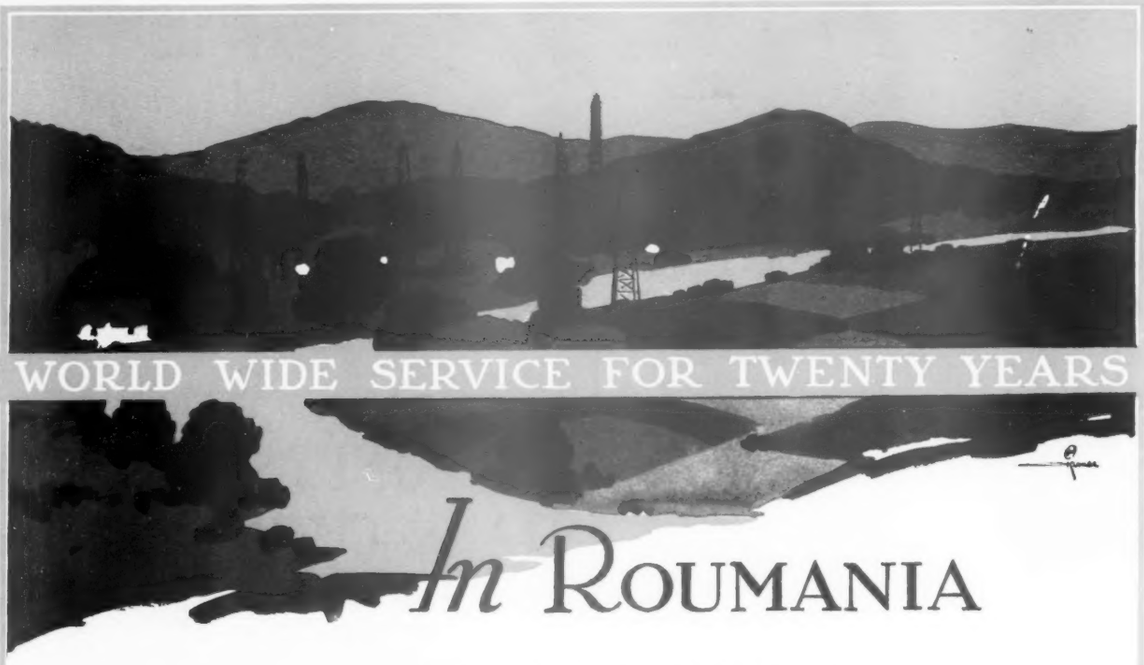
In trying to pull a string of 8-inch pipe in the J. & S. Development Co.'s well on the Sliva property at Deindorfer and Charles Streets, the rig was pulled down.

Outside Developments

The Sun Oil Co.'s test near Owosso, in Shiawassee County, struck the top of the Berea sand at 1,798 feet and at 35 feet in the sand had no showing of either oil or gas, and is drilling deeper. Additional testing will be done in this locality which has been a center of keen interest among oil men.

Gas that made a strong flow in the Sun Oil Co.'s first well near Ashley, in Gartiot County from a sand at 490 to 507 feet, failed to make its appearance when the company's second test on the Edwin Robbinnolt property, 1½ miles northwest of the gas well, was drilled through what appeared to be the same formation. Instead the well got water at 485 feet. The well will be drilled on down to test out the Berea sand. Failure to get the same gas in this well as was tapped in the first is not considered to be of any particular significance as regards the possibility of a field near Ashley for it merely shows one location where the gas is not present, and another drilling in the vicinity may get the gas. The Owosso well of the Sun Oil Co. on the Robbinnolt farm is now nearing where the Berea sand should be found, reported better than 1,600 feet deep.


Moore
TUBULAR STEEL DERRICKS
IN ROUMANIA
KUHLER



WORLD WIDE SERVICE FOR TWENTY YEARS

In ROUMANIA

Where the forest-clothed Carpathians look down on quiet, fruitful valleys, on toilers in woodland and farm land, you find Moore Tubular Steel Derricks at work in the development of the country's great petroleum industry.

Simply constructed, strong and versatile, Moore derricks are conveniently transported, quickly erected and easily dismantled. They are ideal for service here, as they are in all other oil fields the world over.

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LEE C. MOORE & COMPANY, INC. PITTSBURGH · TULSA

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Casper, Wyo. Shreveport, La. El Dorado, Kan. El Dorado, Ark.

CANADIAN FIELDS

(Continued from Page 55)

drilling outfit from the abandoned Roth No. 2 deep test at Redcliffe being used. W. G. Rowe will be in charge of operations.

New Turner Valley Tests

In the Turner Valley Field, the Royalite Oil Co. will drill several additional rotary tests this summer, chiefly as offsets to other producers. Royalite Oil Co. No. 8 will be located 200 feet west of the New McDougall-Segur lease, and west of the New McDougal-Segur No. 1 well, which has a production from the Dakota sand at 2,595 feet. Royalite No. 9 will be drilled 260 feet south of the Vulcan Oils, Ltd. lease on which Vulcan No. 1 deep producer is located. Apparently both will be tests of the Dakota production, the wells in both cases starting as 11½-inch holes. Work has been commenced on the cellar of Royalite No. 1. Wooden derricks and rotary outfits will be used. It is understood that several other wells will be drilled by the Royalite this summer.

Royalite Oil Co. No. 7, LSD 3, Section 13-20-3w5, is reported drilling at 3,410 feet.

Dalhousie Oil Co. No. 6, LSD 10, Section 13-20-3w5, where the drilling plant was recently destroyed by fire, has a new derrick up and is installing machinery to resume drilling at 3,720 feet. It is expected the test will be again drilling by July 15. The fire is believed to have originated in a short-circuit of the wires in the cellar of the well. In toppling over the derrick fell on the casing rack and the 10-inch tools dropped to the bottom of the hole. Shortly before the fire, the Dalhousie No. 6 got an oil sand in the Kootenay horizon with about 15 bbls. a day of light crude.

Dalhousie No. 1, diamond drill test, LSD 4, Section 18-20-2w5, is reported at 3,725 feet and drilling. Dalhousie No. 5, LSD 16, Section 30-19-2w5, has resumed drilling at 4,418 feet after installing a new drilling line.

Install Step Drip

Home Oil Co. No. 1, LSD 10, Section 20-19-2w5, is being put on a producing basis. A step drip is being installed to extract the crude naphtha from the wet gas. The well is making 6,250,000 feet a day, with a recovery of 40 bbls. a day of 42 gravity crude, and a potential crude naphtha production of 65 to 70 bbls. As soon as the drip is finished a production test will be made. Six 250-bbl. tanks are being set up to handle the production. The 8¼-inch casing has been set and the 8¼ and 10½-inch strings connect at the top with a master valve and a 6-inch line run 500 feet from the derrick to carry off the gas. Rig builders are putting Home No. 2, LSD 14, Section 20-19-2w5, into shape to resume drilling at 2,095 feet. This test, formerly Advance Oil Co. No. 2, got a fair show of light crude in the Dakota sand but not sufficient for commercial production. It will be deepened to the same horizon as No. 1 Home.

New McDougall-Segur No. 1, LSD 14, Section 12-20-3w5, is again hauling crude to Okotoks for shipment, after being tied up for some time by bad roads. New McDougall-Segur No. 2, same LSD, is reported drilling around 1,000 feet.

Great West Oils No. 1, SE, Section 7-20-2w5, is using nitric acid to clear the top of the 2,000 feet of casing in which a spud is jammed. A first lot of 20 gallons dissolved one side of the top of the string and a second lot of 15 gallons has since been put down in a wooden bailer. The hole is down 5,370 feet and the jam in the casing is at approximately 3,350 feet depth.

British Dominion Oil Corp. No. 1, LSD 4, Section 5-20-2w5, has resumed drilling at 5,980 feet, after cementing a small caving. Considerable open hole is being run.

McLeod Oil Co. No. 3, LSD 16, Section 1-20-3w5, is reported at 2,575 feet and drilling, apparently in the top of the Dakota sand. Spooner Oils No. 1, LSD 12, Section 13-20-3w5, is reported in the Fernie shales at 4,000 feet and drilling open hole for the 8¼-inch casing. The drillers expect to reach the lime at 4,400 feet. There is considerable oil and a little gas in the hole. Vulcan Oils No. 2, LSD 11, Section 13-20-3w5, is drilling at 1,700 feet and carrying the 12½-inch casing. Regent Oil Co., LSD 16, Section 1-20-3w5, is drilling at 2,160 feet in a hard shale with some gas coming from the hole. The 12½-inch casing has been set at 2,150 feet. Sentinel Oils, Section 8-20-2w5, is at 1,630 feet and drilling, with the 15½-inch casing carried down to 1,515 feet.

New Valley Oil Co., LSD 4, Section 6-21-2w5, is reported to be resuming drilling at 1,550 feet. At the annual meeting recently H. P. McLeod, W. C. Walsh, P. J. Timms, John Schultz and H. A. Horsemen were elected directors. The directors are considering the taking over of 1,200 acres in the Rickert area.

Beaver Dome

Madison Oils, Ltd. which made a tentative location last summer in LSD 8, Section 34-20-3w5, is reported planning to shift its activities to the southern fields where it has an 80-acre lease on the Beaver Dome. The company has 40 acres optioned in the north end of the Turner Valley; and last season drilled a test in Montana, which secured a small production. At the company's annual meeting recently the following officers were elected: president, John McCaffery; vice president, Dr. Simmons; secretary, G. T. Wright; directors, Dr. McArthur and Morris Weiss.

Calmont Oils, LSD 2, Section 1-20-3w5, is at 3,775 feet and drilling. Foothills Oil & Gas Co. No. 1, SW, Section 26-20-3w5, is rigged up ready to spud in. Okalta Oils No. 1, LSD 1, Section 1-20-3w5, is drilling at 2,640 feet.

In the Jumping Pound district 25 miles west of Calgary, Imperial Oil, Ltd. Bow River No. 1, LSD 15, Section 12-25-5w5, has a fishing job at 5,585 feet. In the Highwood district, Imperial-Highwood No. 1, LSD 3, Section 36-18-3w5, is at 2,377 feet and drilling.

In the north end of the Turner Valley Field, Stockmen Oils No. 1, LSD 1-2, Section 27-20-3w5, is reported at 4,640 feet and making hole for the 8¼-inch casing. Analysis of rock samples from the 4,510 and 4,540 foot levels indicate that the dolomitic content of the limestone bands being penetrated by the drill is rapidly increasing, which means that the drill is getting near the Madison limestone.

Moose Mountain

In the Moose Mountain district, Signal Hill Oil Co. No. 2, LSD 9, Section 34-23-5w5, is at 1,200 feet and drilling, after a shut down for some weeks waiting for a new cable. The drill is in a hard sand in the lower Benton, with occasional small shows of oil. The test is expected to get the horizon which was productive in the old Moose Mountain No. 2 well at 1,600 feet. Vance Forcea and R. J. Denne are drillers with a double-tower.

On the Morley Indian Reserve, Gold Coin Oils is reported at 2,743 feet and drilling in a hard sandy shale, with indications of increased gas flow.

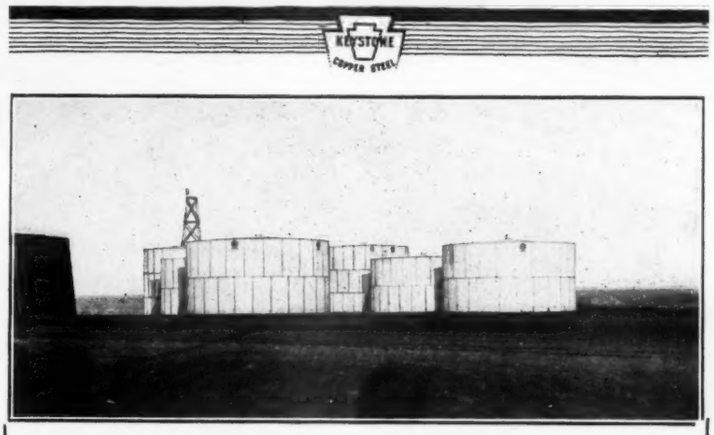
In the De Winton district, Anglesey-Lakeview No. 1, LSD 1, Section 22-21-1w5, has the derrick up and transmission line for supplying electric power for drilling installed, and is waiting for the machinery.

In the Steveville district, southern Alberta, a local syndicate is being organized by Brooks, Hanna and Bassano men to drill a test for oil. Dr. A. G. Scott of Bassano and Dr. B. E. Barlow and N. McFadyen are among those interested.

Steveville is located in Section 4-22-12w4, about 45 miles west of Bassano; and a structure was discovered here by Dr. Dawson of the Geological Survey of Canada in 1884. The structure was reported on by a number of geologists in 1914 at the time of the Calgary boom; but it has never been drilled. The Scott group is planning to put down a test this summer.

Irma-Wainwright

In the Irma-Wainwright Field east of Edmonton the National Exploration Co., LSD 1, Section 30-45-6w4, is reported near the oil sand at 2,003 feet. Coring



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MALONEY ALONE

Why Did Joe Install Cooper Engines?

That is a question being asked rather frequently wherever gas engines and compressors are used. It is always the logical question when any company swings to a new type of equipment that may even cost a little more than what they have been using. In this case the answer usually is, "Joe's superintendent came out strong for Cooper engines for the new plant," or "One of Joe's directors suggested trying Coopers." Whatever the explanation it seldom gets down to the real reason.

If Joe is a plant operator he is recommending Cooper engines because they are accessible and easy to keep on the load. If he is a superintendent he recommends Coopers because he wants a plant which will set new operating and production records and perhaps bring him special recognition. If he is higher in the organization—a director or a stockholder he wants Coopers because he has learned that their operating costs are lower and consequently his yearly profits are greater.

THE C. & G. COOPER COMPANY—

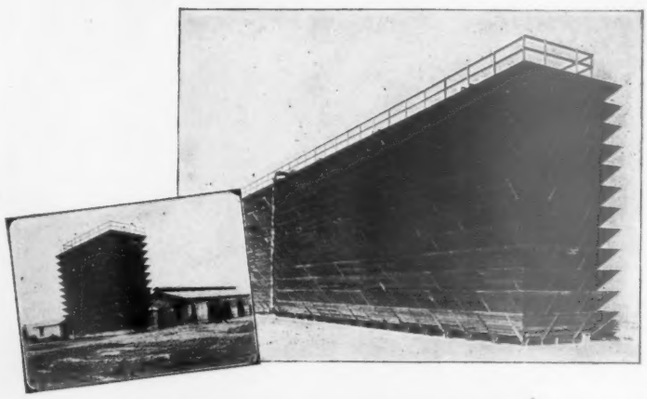
The New Cooper Type 19

This is a medium size double-acting engine suitable for natural gas compressing stations, larger gasoline plants and for driving electric generators. It provides maximum power with minimum weight. Even the larger parts are light enough to be easily transported and erected. Installation costs are therefore low. Like all Cooper engines, they cost little to maintain.

This engine is built as a single cylinder 200 H.P. twin cylinder, 400 H.P. single tandem 380 B.H.P. and a twin tandem 760 B.H.P. unit. Hence it meets a wide range of conditions.

It was designed with the idea of making it the best engine of its type. Cooper manufacturing facilities and quantity production methods are however making the cost of it very reasonable. It has already been tested in West Virginia, Oklahoma and California. A new station containing nine of the 760 B.H.P. size is now being put into operation in California.

Mt. Vernon, Ohio, Tulsa, Dallas, Los Angeles



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Interchangeability of parts and accurate factory fabrication insure maximum speed in erection.

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Constructors and Engineers

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FLUOR REDWOOD COOLING TOWERS

will be started at 2,100 feet and the test is expected to get production early in July. As soon as coring is finished the casing will be cemented and the well drilled in. It is located close to the Edmonton-Wainwright Oils No. 1, LSD 4, Section 29-45-6w4, which got production at 2,275 feet but was shut down when water got into the well. British Wainwright Oils No. 1, LSD 4, Section 22-45-6w4, has had an unfavorable water test; and may be discontinued at the present depth of 1,000 feet and a new test started. There is a possibility that the government representatives may allow the present test to go ahead. Interior Oil Co., Section 36-44-7w4, is reported ready to resume drilling, after a shut-down at 1,925 feet.

On the Ribstone-Blackfoot structure, London-Ribstone Syndicate No. 1, LSD 14, Section 10-43-3w5, has spudded in. Ribstone Oils, LSD 1, Section 1-46-1w4, is reported to have got an oil sand at 1,615 feet. As soon as some repairs can be made to the derrick the sand will be tested. The well has a fairly large gas flow.

In the Viking gas field, Northwestern Utilities, Ltd. of Edmonton has finished in the Viking sand with an estimated production of 8,115,000 feet a day. The well has been shut in. The crew has started rigging up No. 13, which will be the only other well drilled by the company in the Viking Field this summer.

Border Fields

In the border fields, Canadian Western Natural Gas Co. No. 8, LSD 12, Section 6-6-10w4, in the Foremost Field is reported at 1,000 feet and drilling. The test will be carried to the Foremost gas sand around 2,000 feet. In the Warner district Gas Production No. 1, NE, Section 21-4-18w4, has finished the cellar and started work on derrick. It will spud in early in July.

The Claresholm Oil Co. of Claresholm, Alta, is planning to drill a test in the Wetaskiwin area; to be followed by further drilling in the Claresholm district.

In the Lundbreck district, southern Alberta, the Southwestern Coal & Oil Co., which has heretofore devoted its attention to the development of coal properties near Lundbreck is reported arranging for testing of its acreage for oil on a royalty basis. It is reported that one royalty agreement has already been signed and the derrick will be erected and drilling started early in the summer. J. C. Kellar of Spokane is president of the Southwestern Coal & Oil Co.

British Columbia

Renewed interest is being shown in the Sage Creek area in British Columbia. This acreage, in the Flathead Valley of southeastern British Columbia, is being tested by the British Columbia Oil & Development Co. of Victoria, B. C. The first showings in this area were discovered more than 25 years ago in seepages in the rocks and on the surfaces of the creeks. The seepages were a light crude, somewhat resembling the light crudes of the Turner Valley Field. Later Geologist Ralph Arnold made a report on the field. A number of companies subsequently filed on acreage; and later merged to form the Amalgamated Oil Co. Development work has since been carried on upon Amalgamated acreage by two companies, the Crows Nest Oil Co., whose acreage and test was later taken over by the Glacier Oil Co., and the B. C. Oil & Development Co. Both tests are down over 3,200 feet.

PROF. C. F. MABERY DIES AT PORTLAND, ME.

PORTLAND, Me., July 2. — Prof. Charles F. Mabery, internationally known scientist and for 35 years head of the Standard Oil Co.'s laboratory, died in a hospital here Sunday at the age of 77. He had suffered two shocks within three weeks.

Professor Mabery graduated from the high school at New Gloucester, where he was born, and from Harvard University, from which he received the Bachelor of Science degree and a doctor's degree. He was an instructor in chemistry at Harvard for four years and professor of chemistry at the Case School, Cleveland, for 27 years.

He entered the petroleum field in 1887, continuing in this work until his fatal illness. He also engaged in research in other fields. For the past 20 years he had done much research work in Europe. He was a member of many foreign scientific societies, the American Philosophical Society and the American Society of Arts and Sciences.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at the principal United States ports for the week ended June 25 totaled 1,681,000 bbls., a daily average of 240,143 bbls., compared with 1,189,000 bbls., a daily average of 169,857 bbls. for the week ended June 18 and a daily average of 189,179 bbls. for the four weeks ended June 25.

At Atlantic Coast Ports—	
Baltimore	290,000
Boston	117,000
New York	963,000
Philadelphia	.....
Others	.....
Total	1,370,000
Daily average	195,714
At Gulf Coast Ports—	
Galveston district	20,000
New Orleans and Baton Rouge	291,000
Port Arthur and Sabine district	.....
Tampa	.....
Total	311,000
Daily average	44,429
At All United States Ports—	
Total	1,681,000
Daily average	240,143
Daily average four weeks ended	189,179

Receipts of California crude and refined oil at Atlantic and Gulf Coast ports for the week ended June 25 totaled 959,000 bbls., a daily average of 137,000 bbls., against 601,000 bbls., a daily average of 85,857 bbls. for the week ended June 18, and a daily average of 107,750 bbls. for the four weeks ended June 25.

At Atlantic Coast Ports—	
Baltimore	97,000
Boston	.....
New York	521,000
Philadelphia	236,000
Others	105,000
Total	959,000
Daily average	137,000
At Gulf Coast Ports—None.	
Total Atlantic and Gulf Coast ports	959,000
Daily average	137,000
Daily average four weeks ended	107,750
Distribution of total California receipts is as follows:	
Crude	290,000
Gasoline	361,000
Gas oil	175,000
Fuel oil	133,000
Total	959,000

CAN SURRENDER LEASE WITHOUT FURTHER COST

AUSTIN, Tex., July 2.—An oil company holding lease on land has the right to surrender its lease without further cost if it does not want to drill, the Supreme Court has ruled.

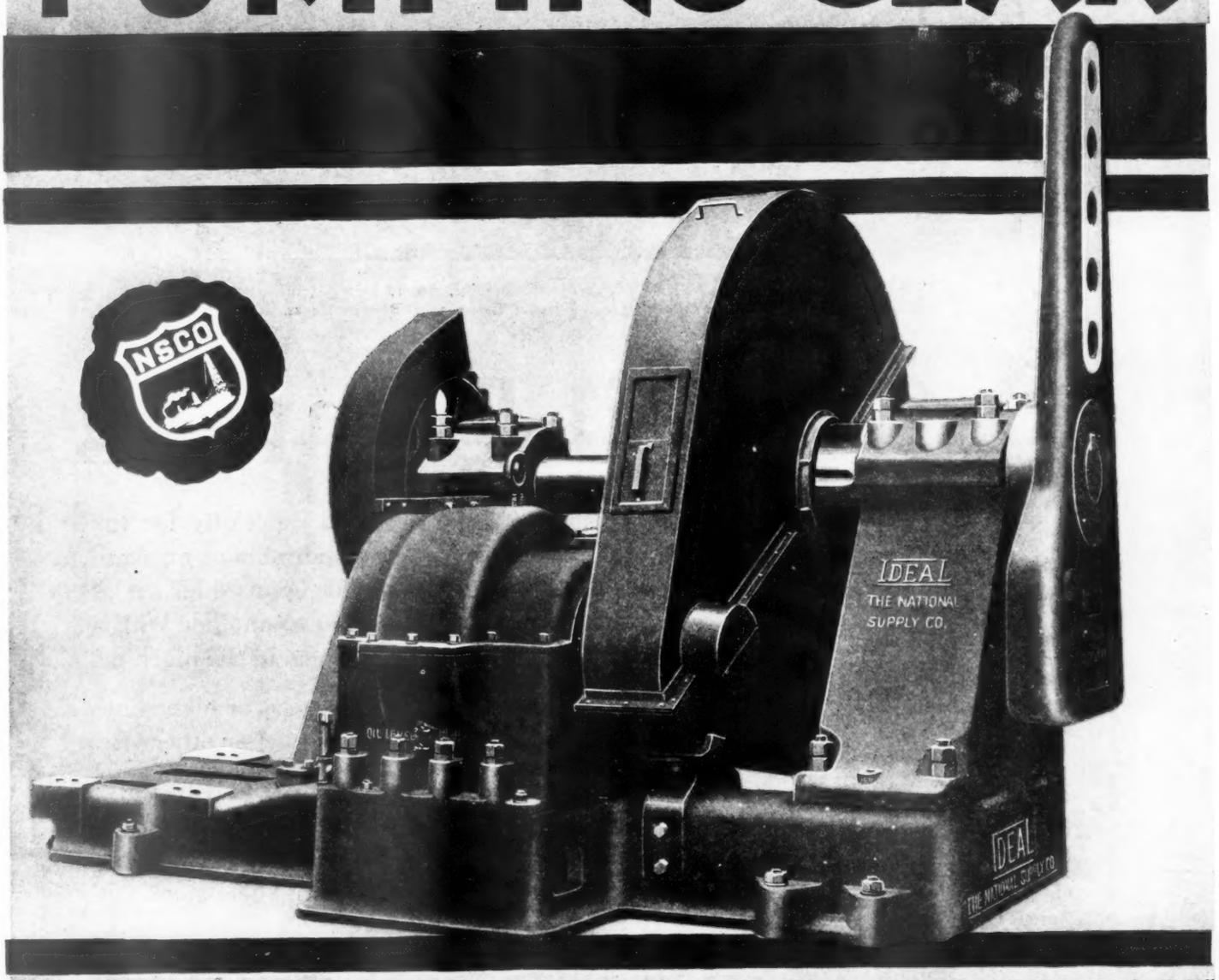
Former Governor O. B. Colquitt of Dallas was denied judgment in a suit he brought against the Simms Oil Co. for $7,000 in oil rentals in lieu of the company's failure to drill for oil.

Both district and appellate court rulings were reversed, the Supreme Court holding that Colquitt's agreement with the company did not bind it to drill, but merely granted to Colquitt a portion of what oil might be found in the event prospecting occurred, and that the company could surrender its lease and not be further bound.

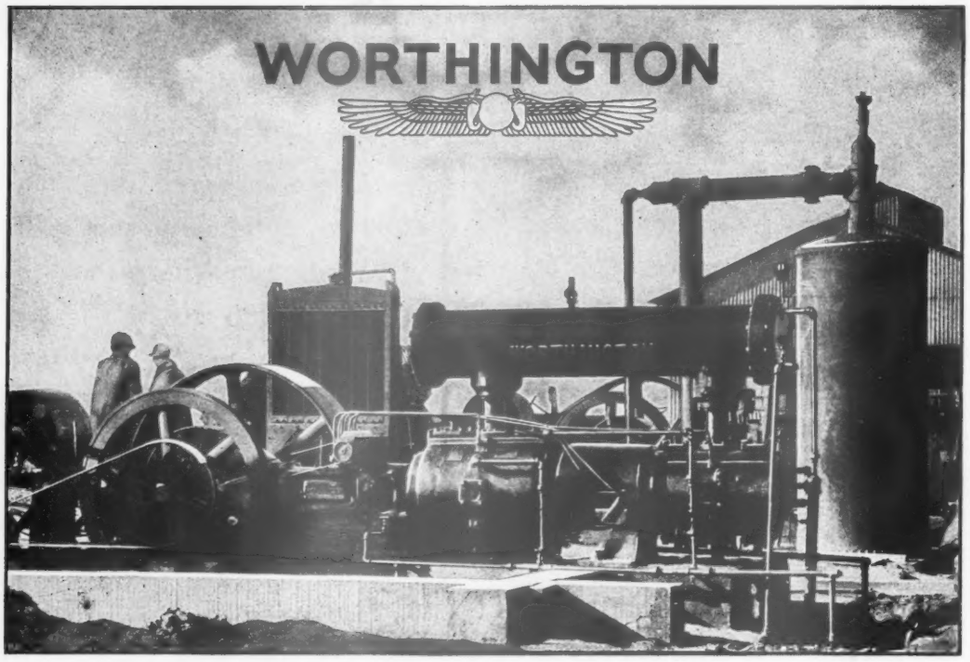
LIBRARIANS' CONVENTION

The Special Libraries Association, comprising groups of libraries from financial, industrial, technical, advertising, legal and other special types of libraries, held its nineteenth annual conference in Toronto, Canada, the week of June 20. The theme of the convention was "Contacts With Information Sources—How to Make and Use Them." D. F. Brown, librarian of the Standard Oil Co. of New Jersey, outlined the activities of the Oil Group in developing a central index of all information in print about the oil industry.

IDEAL
DOUBLE REDUCTION PUMPING GEAR



THE NATIONAL SUPPLY COMPANIES



Two-stage, high-pressure FEATHER Valve Air Compressor, size 10 in. x 4¾ in. x 12 in., installed at Skelly Oil Company, Johnson Lease, near Borger, Texas.

Air-Gas Oil Pumping

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CONDENSERS *and* AUXILIARIES
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This compressor has been designed especially for the oil fields and is suitable for either permanent or semi-permanent installations. Mounted upon skids, it is easily transported from one location to another with a minimum of trouble and without injury to the machine.

It can be driven by electric motors, gas or oil engines and is adapted to belt drive, short coupled or otherwise.

A complete line of Worthington FEATHER Valve Compressors has been developed to meet all conditions in the oil-field and the most commonly used sizes are available for immediate delivery from Tulsa stock.

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Los Angeles, Cal.	Worthington Company, Incorporated

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WORTHINGTON PUMP AND MACHINERY CORPORATION, 115 BROADWAY NEW YORK, U. S. A.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 38)

CONCHO COUNTY

Harry Adams et al's No. 1 Price, C SW Sec. 78, Blk. 71, Alex Gregg Sur. Elev. 1,918 feet — Drilling 1,500 ft.

Associated Oil Co.'s No. 1 Sam Waring, Sec. 2,035, J. W. Godhardt Sur. — Drilling 730 ft.

The Exploration Co.'s No. 1 Hargrove, Blk. 240, J. Schouch Sur. Elev. 1,718 feet — Total depth.

CROCKETT COUNTY

George Anderson and Marland Oil Co.'s No. 1 University — Rig.

V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur. — Shut down 2,110 ft.

J. K. Hughes' No. 2-B Powell, Sec. 63, E. L. & R. R. Sur., Elev. 2,783 feet — Fishing for 18 joints 8-in.; total depth 2,535 ft.; shut down.

Magnolia Petroleum Co.'s No. 2 Shannon — Show oil 2,385-90 and 2,992 ft.; total depth 4,100 ft.; fishing 20 joints 8-in. casing.

William Shaffer et al's No. 1 University, C SE SE Sec. 9, Blk. 47, University Sur., elev. 2,344 ft. — Total depth 2,344 ft.; plugged back to 2,208 ft.; shot 10 qts. 2,170-95 ft.; shut down.

William Schaffer et al's No. 2 University, 1,350 ft. N and 2,610 ft. E of SW cor. Sec. 9, Blk. 47, Univer. Land — Top salt 1,060 ft.; drilling 1,705 ft.

W. W. Donnelly, Young, Logan & Hult's No. 1 Pierce, C SW Sec. 150, Blk. O, G. H. & S. A. Sur., elev. 2,105 ft. — Rainbow show 454 and 540 ft.; shut down for 10-in. 1,375 ft.

Word Oil Co.'s No. 1 Schneeman, N and W SE cor. Sec. 57, Blk. BB, G. C. & S. F. Sur., elev. 2,679 ft. — Top salt 1,035 ft.; sulphur water 2,490 ft.; total depth 2,575 ft.; trying to swedge pipe.

Young & Donnelly's No. 1 J. M. Shannon, C Sec. 11, Blk. 9, D. & S. E. Sur. — Spudded and shut down.

CULBERSON COUNTY

James H. Gardner et al's No. 1 Radford, C SE Sec. 29, Blk. 62, Public School Land Sur. — Straightening hole 420 ft.

Scott & Dittman's No. 1 Miller, SW cor. NW NE Sec. 1, School blk. 97 — Spudded 50 ft.

DAWSON COUNTY

R. R. Penn's No. 1 Wright, Elev. 2,842 feet — Shut down for water 1,260 ft.

ECTOR COUNTY

J. S. Cosden, Inc., et al's No. 2 Connell-A, NW cor. NE Sec. 13, B-16, School Land, elev. 2,844 ft. — Top salt 870 ft.; top lime 3,177 ft.; first show 3,420-22 ft.; pay 3,471-3,515 ft.; 160 ft. oil in hole; shot 180 qts.; estimated 1,000,000 ft. gas; swabbed and flowed 82 bbls. June 30; casing collapsed 500 feet off bottom.

J. S. Cosden et al's No. 3 G. W. Connell-A, SE cor. NE. Sec. 13, Block B-16 — Top salt 863 ft.; show oil 3,375 ft. and 3,499 ft.; top lime 3,195 ft.; shot 200 quarts 3,465-3,545 ft.; swabbed 7 bbls.; shot in water.

FISHER COUNTY

Zoch & McCamey and Marland Oil Co.'s No. 1 Lanius A (was Danciger O. & R. Co.'s No. 1 Lanius), NE cor. SE Sec. 15, Blk. Y, T. & P. Sur. — Set 5-in. 3,661 ft.; hole full water 3,770 ft.; run 5-in. 3,825 ft.

Ideal Oil Co.'s No. 1 Jameson, C SE Sec. 111, Blk. 1, H. & T. C. Sur. — Hole full salt water 2,345-2,520 ft.; drilling 3,005 ft.

Marland Oil Co. and Texon's No. 1 McCall, Sec. 108, Blk. 3, H. & T. C. Sur. — Rig.

Marland Oil Co. and Vacuum Oil Co.'s No. 1 J. H. R. Lagow, Sec. 3, Blk. 22, T. & P. Sur. — Drilling 2,890 ft.

Miley Oil Corp. and Marland Oil Co.'s No. 1 W. W. Ammons, Sec. 198, Blk. 3, H. & T. C. Sur. — Engine trouble 1,750 ft.

R. W. Raney's No. 2 Maberry, Sec. 56, Blk. 1, T. & P. Sur. — Shut down for orders 2,725 ft.

Sinclair Oil & Gas Co.'s (was Bourdon Royalty Co's) No. 1 J. A. Danise, Sec. 6, Blk. K, T. & P. Sur. — Underreaming 12-in. 730 ft.

Stearns & Streeter's No. 1 W. A. Howell, N and E SW cor. NE Sec. 12, Blk. 23, T. & P. Sur. — Set 6-in. 3,565 ft.; shut down for fuel 3,808 ft.

The Texas Company's No. 1 D. S. Stevens, C SW SE SE Sec. 79, Blk. 1, H. & T. C. Sur. — Shut down for spear 1,978 ft.

FOARD COUNTY

C. H. Clark et al's No. 1, SW cor. Sec. 89, Blk. 44, H. & T. C. Sur. — Rig.

Fain-McGaha Oil Corp. & Roxana's No. 1 Matthews — Sandy lime 855-60 ft.; 1,000,000 ft. gas; shut down 1,389 ft.

Humble O. & R. and Navarro Oil Co.'s No. 1 L. McAdams, C S ½ Sec. 27, Blk. L, S. P. Sur. — Hole full water 2,560 ft.; drilling 3,250 ft.

The Texas Company's No. 1 Watkins — Drilling 700 ft.

GAINES COUNTY

Westheimer & Daube's No. 1 Birge & Forbes Land Co., Sec. 308, Terrell County School Land — Rotary drilling 3,610 ft.

GARZA COUNTY

Emerald Oil Co.'s No. 1 D. Boren, NW cor. NE Sec. 137, Blk. 5, H. & G. N. Sur. — Small show oil in gray lime 1,884-1,902 ft.; shut down 2,600 ft.; show oil and hole full water 2,420-60 ft.

Pandem Oil Co.'s No. 1 Justice, SW cor. NW Sec. 2, Blk. 6, H. & G. N. Sur. — Drilling 450 ft.

GLASSCOCK COUNTY

California Co.'s No. 1 W. B. Currie, Sec. 215, Blk. 29 — Rigging up.

Green et al's No. 1 F. G. Oxsheer, Sec. 6, Blk. 34, T. & P. Sur., Elev. 2,540 ft. — Drilling 800 ft.

Landreth Producing Corp.'s No. 1 A. L. Houston — Drilling 900 ft.

World Oil Co. and J. S. Meriwether's No. 1 L. F. McDowell, C SW Sec. 43, Blk. 34, Twp. 2-S, T. & P. Sur., elev. 2,553 ft. — Drilling 1,170 ft.

R. P. Penn et al's No. 1 W. P. Edwards, C SE Sec. 11, Blk. 34, Twp. 2-S, T. & P. Sur., elev. 2,501 ft. — Slight show oil 905 ft. in brown sand; top salt 1,295 ft.; top lime 2,385 ft.; drilling 3,181 ft.

Sid Richardson, C. O. Collins and Merle Cadman's No. 1 Burns, NE cor. SW Sec. 183, Blk. 29 — Drilling 1,700 ft.

HOWARD COUNTY

Fred Carey et al's No. 2 G. O. Chalk, SE NW Sec. 124, Blk. 29 — Shut down 1,040 ft.; hole full salt water.

W. W. Donnelly et al's No. 1 Martin, SE cor. Sec. 41, Blk. 33, T-2 N, T. & P. Sur., Elev. 2,552 ft. — Shut down 1,970 ft.

Francis & Brunson's No. 1 J. W. Furrh, C SW Sec. 11, Blk. 31, T. & P. Sur., T-1-S — Location.

Marland Oil Co. and Zoch's No. 1 Jones, Sec. 32, Blk. 27, T. & P. Sur., elev. 2,218 ft. — Shut down 600 ft.

Marland Oil Co.'s No. 1 A. M. Fisher, Sec. 1, Blk. 33, T. & P. Sur., T-2-S, elev. 2,730 ft. — Drilling 1,250 ft.

L. C. Harrison et al's No. 1 Dora Roberts, Sec. 158, Blk. 29 — Total depth 900 ft.; setting 10-in.

Marland Oil Co. and Zoch's No. 1 Guitar est., No. 1, Sec. 4, Blk. A, Bauer & Cockrell Sur., elev. 2,517 ft. — Top salt 1,155 ft.; show oil 3,157 ft.; hole full sulphur water 3,600 ft.; ran 6-in. 3,864 ft.

Owens & Sloan's No. 1 John Roberts, Sec. 136, Blk. 29, W. & N. W. Sur. — Shot 90 qts. 1,898-1,923 ft.; total depth 1,928 ft.; top pay 1,848 ft.; swabbed 40 bbls.

HUDSPETH COUNTY

Lockhart Brothers' No. 1 Gardner & Moseley, C SE Sec. 5, School Blk. 21 — Shut down 235 ft.

IRION COUNTY

Cash Dollar et al's No. 1 G. J. Bird, NE Sec. 16, Blk. 10, S. P. R. R. Sur. — Shut down 2,500 ft.

JEFF DAVIS COUNTY

Humble O. & R. Co.'s No. 1 Crecencio Flores, Sec. 34, Blk. 58, T. & P. Sur. T-8 — Straightening hole 370 ft.

All In One Day

Oklahoma customer using Star No. 44ST

Left camp at seven A. M.

Moved four miles to well

Pulling 3000 pound tool house

Rigged up machine

Pulled tubing and rods from 1700 foot well

Cleaned out, replaced rods and tubing

Back at camp with machine at six P. M.

Here is an economy of time and money that reduces cleaning out costs to a minimum. Wherever Star No. 44ST machines are used, similar economical performance is reported.

Remember, the 44ST does a complete cleaning out job . . . it moves completely assembled under its own power . . . is quickly rigged up . . . has flexible speeds for fast bailing and heavy pulling . . . is powered by a 15-30 International Tractor and serviced by 105 International Harvester Co. stations.

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The Star Drilling Machine Co., Akron, Ohio

Please send us complete information on your No. 44ST machine.

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Oil & Gas Journal

Will Cut Your Cleaning-out Costs!

"OILWELL" SPRING

In the California Field

The photograph to the left shows the block relieved of the load.

"OILWELL" Spring Travelling Blocks eliminate the necessity of a spring hook as there is a spring attachment in the lower clevis.

They have two springs which give better spring action. Though large in size and extremely powerful, they are shorter over-all when equipped with any common casing hook than a regular travelling block with a spring casing hook.

The large center pin is drilled so that each sheave is lubricated independently. Lubrication is by means of the Alemite System and an Alemite gun is furnished with each block. Alemite connections are so located that they are not liable to damage.

Sheaves can be removed by pulling out the center pin without dismantling any other part of the blocks except removing the guards on blocks so equipped.

"OILWELL" ESTD 1862 TRADE MARK. (REGISTERED)

Inquire at any of ou

OIL WELL SU

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQU

NG TRAVELLING BLOCKS
(PATENTED)

The photograph to the right shows the block with springs under compression carrying the load.

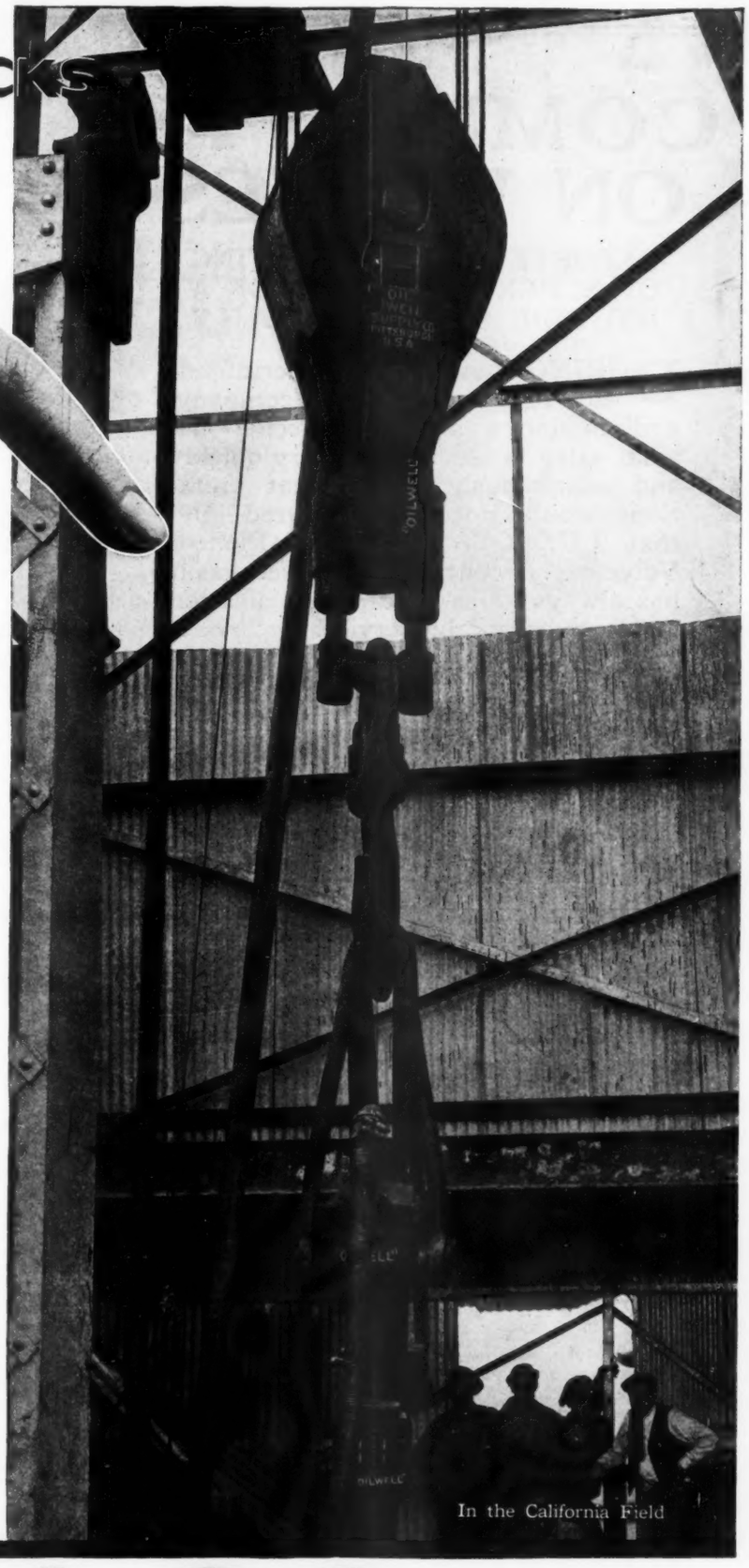
The side plates carry heavy steel side bars which not only strengthen the blocks but also prevent the blocks from getting caught in the derrick.

Made in two sizes—54-inch shell with 6-inch center pin and 30-inch diameter sheaves (length over-all 7 feet), and 66-inch shell with 6-inch center pin and 36-inch diameter sheaves (length over-all 9 feet, 4 inches).

The 66-inch block is so constructed that the spring attachment can be swung over to the side and the block stood on end when stringing the lines.

Both sizes can be furnished bronze bushed or with roller bearings. Where roller bearings are furnished, they operate in high grade heat treated steel races and the lubricant is retained in the bearings.

Can be furnished with triple, quadruple or quintuple sheaves, and either with or without guards. Can also be furnished without spring attachment, if desired.



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of our 100 Branches

SUPPLY CO.

LD EQUIPMENT

BRANCH STORES IN ALL OIL FIELDS

The Ludlow

COMMENTS ON VALVES

—REPORTED FROM A MEETING OF SUPERINTENDENTS OF A BIG PIPE LINE COMPANY

DURING a meeting of superintendents of a large pipe line company, a discussion was held to decide just what valve to use. It was very quickly and unanimously agreed that imitations would not be considered—and that LUDLOW Valves, the Pioneer Valve, would continue to be used—as it has always given greatest satisfaction and long dependable service.

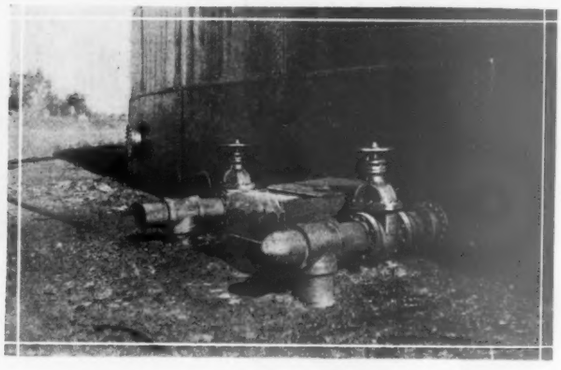
A WORD TO THE WISE —USE ONLY LUDLOW

DOUBLE GATE PARALLEL SEAT VALVES

STOCKS MAINTAINED AND REAL SERVICE GIVEN By

Mid-Continent Supply Company, Ft. Worth, Texas
Harrisburg Pipe & Pipe Bending Co., of Texas, Inc., Houston, Texas.
Peden Iron & Steel Company, Shreveport, La.
Henderson Iron Works, Shreveport, La.

THE LUDLOW VALVE MFG. CO.
TROY, NEW YORK
KANSAS CITY CHICAGO BOSTON PITTSBURGH



Double Gate Parallel Seat Valve

J. K. Hughes Dev. Co.'s No. 1 J. Z. Means, 600 ft. from N line and 2,000 ft. from W line of M. Robinson Sur. No. 1 ..... Hole full fresh water 3,075 ft., rainbow show at 3,180 ft.; fishing tools 3,494 ft.

JONES COUNTY

E. R. Brann's No. 1 E. M. Hawk, Sec. 71, Blk. 14, T. & P. Sur. ..... Moving in material.
Midwest Exploration Co.'s (was Campbell et al's) No. 1 L. H. Herndon, Sec. 6, M. E. P. & P. Sur., elev. 1,832 ft. ..... Top pay 2,498 ft.; deepening to 2,524 ft.; swabbed 115 bbls.; drilling ahead 2,533 ft.
Garland & Diamond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands ..... Rig.
Gillette & Hickey's No. 1 M. E. Young, Tevanio Sur. No. 190 ..... Total depth 1,625 ft.; underreaming 6-in.
Hutson & Weaver's No. 1 Smith, Sec. 51, Blk. 18, T. & P. Sur. ..... Shut down for fuel 700 ft.
Kirk & Brewer's No. 1 J. H. Milsap, Justo Rodriguez Sur., League 357 ..... Hole full salt water 2,403-10 ft., rainbow show oil 2,720 ft.; drilling 2,735 ft. in red rock.
Manhattan Oil Co.'s No. 1 S. W. King, Sec. 198, James Bartlett Sur. ..... Shut down 1,700 ft.
Marston Oil Co.'s No. 1 E. Howell, NW cor. SE W ½ of N 400 acres, Sec. 20, Blk. 19, T. & P. Sur. ..... Small show oil 2,496 ft., shut down 2,545 ft.
Marston Oil Co.'s No. 1 J. S. Swan, Robert Spears Sur. No. 280 ..... Hole full salt water 2,390-2,400 ft. and 2,435 ft.; hole full salt water 3,015-20 ft.; drilling 3,050 ft.
Mid-Continent Petroleum Corp.'s No. 1 H. Evans, NE cor. SE SE Sec. 44, S. P. R. R. Sur. ..... Small show oil 2,831-32 ft.; hole full water 3,020-40 ft.; total depth 3,110 ft.; shut down.
W. G. Stough and others' No. 1 J. P. Willis, J. C. Patterson Sur. No. 2 ..... Total depth 1,330 ft.; cleaning out.
Stebbins Oil Co.'s No. 2 Higgs, SE cor. Sec. 30, W. T. Scott Sur. ..... Rig.
Swensondale Oil Co.'s No. 1 Caton, SW NW Sec. 5, Deaf & Dumb Asylum Lands ..... Shut down 1,665 ft.
Tomberlin et al's No. 1 Oscar Clapp, CSL SW Sec. 37, Blk. 16, T. & P. Sur. ..... Drilling 1,695 ft.
World Oil Co.'s No. 1 Boyd (was W. H. Lee), 12,700 ft. N and 2,130 ft. E of SW. cor., Samuel Jones Sur. No. 266, elev. 1,729 ft. ..... Shut down for orders 3,040 ft.
Kingston et al's (was Zeigler) No. 1 Reeves, C SE SE Sec. 164, B. B. B. & C. Sur. ..... Shut down 1,925 ft.

KENT COUNTY

Douglas Oil Co.'s No. 1 Scoggins, Sec. 57, Blk. 7, H. & T. C. Sur. ..... Drilling 2,975 ft.
Marland Oil Co. and Texon O. & L. Co.'s No. 1 Bilby, Sec. 41, Blk. K, Thompson Sur. ..... Location.

KNOX COUNTY

Deep Rock Oil Co.'s No. 1 Jones, CSL Sec. 111, Blk. C, H. & T. C. Sur. ..... Hole full water 2,850-62 ft., drilling 3,250 ft.
Deep Rock Oil Co.'s No. 1 Beavers, CSL Sec. 224, Blk. 44, elev. 1,441 ft. ..... Total depth 2,865 ft.; drilling by casing.
Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. S and 2,590 ft. W of NE cor. Sec. 31, Blk. 4 ..... Shut down for 10-in. 1,150 ft.
Humble O. & R. Co.'s No. 1 Goode, 1,940 ft. S and 200 ft. W of NE cor. Sec. 7, H. T. & B. Sur. ..... Hole full water 1,710-15 ft.; drilling 2,050 ft.
The Texas Company's No. 1 J. O. Bowden, Sec. 115, Blk. 45, H. & T. C. Sur. ..... Drilling 300 ft.
The Texas Company's No. 1 Teague ..... Drilling 1,100 ft.

LOVING COUNTY

Kingwood Oil Co.'s No. 1 T. O. Moore, C NE Sec. 2, Blk. G-25, Public School Land, elev. 3,120 ft. ..... Top salt 1,210 ft.; show gas 1,600-15 ft.; shut down 2,725 ft.
Owens & Sloan's No. 1 W. D. Johnson, C SE Sec. 20, Blk. 53, T-2, T. & P. Sur.; Elev. 2,934 ft. ..... Shut down 1,020 ft.; in litigation.

LUBBOCK COUNTY

Sam Arnett et al's No. 1 Bowles ranch, Sec. 21, Blk. 5, G. C. & S. F. Sur. ..... Drilling 1,100 ft.

LYNN COUNTY

The Hart Oil Corp.'s No. 1 C. O. Edwards, NW NW Sec. 5, Blk. 2, L. & S. V. Sur. ..... Shut down 1,400 ft.; to skid rig.

MIDLAND COUNTY

Orbit Oil Co.'s No. 1 Moreland, C SE Sec. 17, Blk. 39, T. & P. Sur. T-1-S ..... Rigging up.

MITCHELL COUNTY

Robert Thraves' No. 1 C. Way, Sec. 91, Blk. 27, T. & P. Sur. T-1-N ..... Fishing 1,270 ft.
Magnolia Petroleum Co.'s No. 1 T. L. McKenney, Sec. 20, Blk. 29, T. & P. Sur. T-1-N ..... Drilling 3,970 ft.
Tex-O-Kan Oil Co. and Robert Thraves' No. 1 W. F. Sanders ..... Fishing 870 ft.
B. E. Walter et al's No. 1 J. E. Dollen, NW cor. SW Sec. 11, Blk. 27, T. & P. Sur. ..... Shut down 3,955 ft.; hole full sulphur water.

NOLAN COUNTY

A. G. Malone et al's No. 1 J. B. Carlyle, Sec. 35, Blk. 23, T. & P. Sur. ..... Material on ground.
A. G. Malone et al's No. 1 M. C. McElmurry, Sec. 36, Blk. 20, T. & P. Sur. ..... Spudded and shut down; rig blew down.
J. H. Winemiller Corp.'s (was Peters et al's) No. 1 Booth, Sec. 90, Blk. 21, T. & P. Sur. ..... Shut down 960 ft. for water.
Herbert Oil Co.'s (was McClesky and others') No. 1 Pepper, SE cor. SW Sec. 29, Blk. 22, T. & P. Sur. ..... Rigged up and shut down.
Phillips Petroleum Co.'s No. 1 Scott, Sec. 58, Blk. 21, T. & P. Sur. ..... Drilling 3,275 ft.
Zweifel and others' No. 1 Longbotham, C SE Sec. 150, Blk. 1, H. & G. N. Sur. ..... Driving 10-in. 1,735 ft.

PECOS COUNTY

George Anderson's No. 1 Sherbino Brothers, CWL NW, Sec. 43, Blk. C-4, G. C. & S. F. Sur. ..... Location.
Benedum & Trees' No. 1 J. C. Trees, C NW SE SE Sec. 30, Blk. 7, H. & G. Sur., elev. 2,556 ..... Drilling 3,180 ft.; blue shale.
Buell et al's No. 1 Batcheler, C N ½ NE Sec. 89, Blk. OW, G. C. & S. F. Sur., elev. 3,188 ft. ..... Show oil 1,700 ft.; flowed sulphur water 1,775 ft.; fishing 2,740 ft.
Buell & Hagan's No. 1 Jasper, 1 mi. S and W NE cor. Jasper Co. School Land No. 104 ..... Material on ground.
California Co.'s No. 1 I. G. Yates, 1,300 ft. out of SE cor. Sec. 34, Blk. 194, G. C. & S. F. Sur. ..... Drilling 250 ft.
M. C. Dibble & Hale's No. 1 Bonebrake, Sec. 115, Blk. 8, I. & G. N. Sur. ..... Shut down 500 ft.
Diamond Petroleum Co.'s No. 1 Blackstone & Slaughter, Sec. 27, Blk. 2-A ..... Location.
Bob Elmore's No. 1 M. Holmes, Sec. 542, Blk. 1, I. & G. N. Sur. ..... Drilling 375 ft.
Garland & Mott's No. 1 El Paso Cattle Loan Co., C NE Sec. 26, Blk. 126, T. & S. L. Sur., elev. 2,562 ft. ..... Straightening hole 440 ft.
Geo. A. Henshaw, Jr., No. 1 Snyder, Sec. 29, Blk. 144, T. & St. L. Sur. ..... Location.
Kershaw & Livingston's No. 1 Cannon, SW cor. NE Sec. 54, Blk. A-2, T. C. R. R. Sur. ..... Location.
McMan O. & G. Co. and Marland Oil Co.'s No. 1 Yates, 330 ft. N and W of NE cor. Sec. 35, Blk. 194, but located in Sec. 34½ ..... Location.
Marland Oil Co.'s No. 1 Yates, NE cor. Sec. 60, Blk. 1, I. & G. N. Sur. ..... Machine rigging up.
Mazda Oil Co.'s No. 1 M. A. Smith, NE cor. NW Sec. 24, Blk. 194, G. C. & S. F. Sur. ..... Spudded and shut down.
Mid-Kansas and Transcontinental's No. 2 Yates-B, 1,320 ft. N and E of SW cor. Sec. 61, elev. 2,549 ft. ..... Drilling 1,207 ft.; show oil.
Moutray Oil Co.'s (was Pecos Big 3 Oil Co.'s) No. 1 Robertson, Sec. 28, Blk. 10, H. & G. N. Sur. ..... Drilling 640 ft.
Olean Petroleum Co.'s No. 1 Arthur Harral, C SE Sec. 98, Blk. A-2, T. C. R. R. Sur. ..... Location.
Olean Petroleum Co.'s No. 1 G. A. Harral, C SW Sec. 82, Blk. B-3, G. C. & S. F. Sur. ..... Rig on ground.

Permanent Alignment

The alignment problem disappears when pulleys are mounted on Timken Bearings. They permit utmost precision in the original assembly and they maintain it despite the heaviest belt-lash. For Timkens fully withstand thrust and shock as well as greater radial load.

Protection against all elements of wear, friction included, results from Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS*, and Timken-made electric steel. Under all conditions there is entirely self-contained rolling motion in simple, compact, drip-proof mountings. Maximum savings of power and lubricant are certain.

These are the qualities for which Timken Tapered Roller Bearings are incorporated into compressors, pumps and engines by such manufacturers as the Pennsylvania Pump & Compressor Company.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN
Tapered
ROLLER BEARINGS

LUCEY

The latest achievement in Rotary Design and Equipment

Here is the latest Lucey development in 16" Rotary Machines both in pipe screwing and standard types. Every oil man will welcome its unique advantages—a rotary especially adaptable for use with Portable Drilling Rigs and recommended for deep hole operations up to 3,000 feet.

Nothing could be added to make its construction more perfect or more complete. The highest grade electric steel castings and the best steel forgings are used.

It is equipped with genuine Timken Roller Bearings and alemite lubrication.

The one piece construction of the center table of the pipe screwing rotary combines strength and light weight which makes it easily portable.

Every bearing is perfectly lubricated,—each bearing is made over size for better and longer service.

Simplicity and ease of operation are the keynotes of its design. It is a Lucey Masterpiece in oil well drilling equipment.

Any of the Lucey distributors will be glad to demonstrate its superior features at any time.

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ROTARY

Olean Petroleum Co.'s No. 1 Sherbino Brothers, C NW Sec. 31, Blk. C-4, G. C. & S. F. Sur. ..... Location.
Quinby Oil Co.'s No. 1 Townsite, Sec. 1, Blk. 267, Client Addition Sur. Fort Stockton, elev. 2,980 ft. ..... Shut down 3,440 ft.
Quinby Oil Co.'s No. 2 Bennett, C NW 592, Blk. 105, G. C. & S. F. Sur., elev. 2,560 ft. ..... 200 ft. oil in hole from 1,216 ft.; shot 20 qts. 1,208-20 ft.; hole full sulphur water 1,452 ft.; total depth 1,457 ft.; shot 130 qts. 1,353-60 ft.; no results; shut down.
Quinby Oil Co.'s No. 1 A. A. Gray, 660 ft. N and 1,320 ft. E SW cor. Sec. 593, Abst. 3,009 ..... Shut down 680 ft.
Red Bank Oil Co.'s No. 1 Arthur Harral, C SE Sec. 35, Blk. C-4, G. C. & S. F. Sur. ..... Location.
Red Bank Oil Co.'s No. 1 McKenzie, C N ½ Sec. 21, Blk. 126, T. & St. L. Sur., elev. 3,256 ft. ..... Drilling 940 ft.
Seventy-Five Oil Co.'s No. 1 F. A. Perry, C SE NW Sec. 19, Blk. 178, T. E. R. R. Sur., elev. 2,654 ft. ..... Drilling 2,635 ft.
W. R. Shankel et al's No. 1 I. G. Yates, CSL SW SE SE, Sec. 58, Blk. 1, I. & G. N. Sur. ..... Top salt 425 ft.; drilling 1,195 ft.
Simms Oil Co.'s No. 1 A. J. Dowlin, C NE Sec. 12, Blk. 105, G. C. & S. F. Sur. ..... Spudding.
Texon O. & L. Co.'s No. 2 I. G. Yates ..... Rainbow show 1,075 ft.; show oil 1,243 ft.; total depth 1,754 ft.; plugged back to 1,340 ft.; shot 180 qts. 1,240-65 ft.; no increase.
Texon O. & L. Co.'s No. 3 I. G. Yates ..... Location.
Texon O. & L. Co. and Marland Oil Co.'s No. 1 Blakesley, SW cor. Sec. 90, Blk. 11, H. & G. N. Sur. ..... Top salt 840 ft.; flowing sulphur water 2,095 ft.; total depth 2,360 ft.; to run 8-in.
John Droppiemann's No. 1 Mrs. L. Hershenson, Sec. 7, Blk. 51, T. & P. Sur. T-10 ..... Top salt 2,640 ft.; running 6-in. 3,707 ft. in salt.
World Oil Co.'s No. 1 Serf, SW cor. NE Sec. 10, Blk. 130, T. & St. L., elev. 3,425 ft. ..... Location.

PRESIDIO COUNTY

Headlock & Miller's No. 1 Tootle est., Sec. 123, Blk. 3, D. & P. Sur., elev. 2,912 ft. ..... Shut down 2,550 ft.

REAGAN COUNTY

Henshaw & Camp's No. 1 University, Sec. 14, Blk. 48, University Land ..... Rig shut down.
Marland Oil Co.'s No. 1 University-Anderson, Sec. 19, Blk. 58, University Land ..... Location.

REEVES COUNTY

Deep Rock Oil Co.'s No. 1 Caldwell, C SW Sec. 22, Blk. 58, T. & P. Sur., Twp. 8 ..... Hole full sulphur water 3,590 ft.; shut down 3,855 ft.
Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land ..... Spudded 20 ft. and shut down.
Humble O. & R. Co.'s No. 1-B Kloh, C NE Sec. 47, Blk. 56, T. & P. Sur. T-2-S, elev. 2,781 ft. ..... 900 ft. sulphur water 1,760-1,800 ft.; top salt 2,765 ft.; drilling 2,805 ft.
David R. Thompson's No. 1 A. A. Eddins ..... Moving in material.
World Oil Co.'s No. 1 Biggs, C SE Sec. 65, Blk. 112, Public School Land Sur., elev. 3,068 ft. ..... Shut down 1,610 ft.; tools moved to No. 1 Duff.
World Oil Co.'s No. 1 Duff ..... Top salt 1,940 ft.; drilling 2,050 ft.

RUNNELS COUNTY

Noble Oil Co.'s No. 1 Simms, Sec. 12, J. J. McHenry Sur. .. Shut down 1,680 ft.
Lou Ladd et al's (was Frank Yates') No. 1 R. M. McMillan ..... Small show oil and gas 545-62 ft. and 590 ft.; shut down 2,518 ft., contract depth.

SCHLEICHER COUNTY

Beavers & Leath et al's No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T. O. Sur. ..... Spudded and shut down.
Thomas Grey et al's No. 1 Ball Robinson, C NW Sec. 25, Blk. M, G. H. & S. A. Sur. ..... Drilling 1,640 ft.

SCURRY COUNTY

Northwest Co.'s No. 1 T. C. Stinson, NE NW SW, Sec. 101, Blk. 97, H. & T. C. Sur. ..... Tested 8 bbls. 1,745 ft.; another pay at 3,402-07 ft.; bailed 70 bbls. oil in 4 hours and bailed dry; sulphur water 4,505-20 ft.

STERLING COUNTY

Inland Oil Co.'s No. 1 Durham, Sec. 12, Blk. T, T. & P. Sur. ..... Location.
J. P. Williams' No. 1 Clark, NE NE SW Sec. 7, Blk. 8, G. C. & S. F. Sur. ..... Shut down 1,089 ft.;
L. Little's No. 1 Fisher Bros., Sec. 1, Blk. T, T. & P. Sur. .. Shut down 1,436 ft.
Orr et al's No. 1 Neal Reed, CNL Sec. 15, Blk. 30, W. & N. W. Sur. ..... Rigging up.

STONEWALL COUNTY

J. P. Johnson's No. 1 R. P. Morrow ..... Building rig.
R. F. Garland & Co.'s (was McCamey & Zoch's) No. 1 J. Ward, C SW Sec. 153, Mrs. Ward Dobbs Sur., 3 mi. NW of Aspermont ..... Shut down for orders 2,570 ft.

TAYLOR COUNTY

A. J. Brown et al's No. 1 Henslee, NE cor. Sec. 5, Blk. 4, S. P. R. R. Sur. ..... Skidded rig 30 ft. north and spudded 50 ft.
Dorning & Perrine's No. 1 J. A. Hammer, C N 100 acres, Sec. 23, Blk. 19, T. & P. Sur., elev. 1,904 ft. .. Shut down 455 ft.
Gilbert Johnson's No. 1 C. M. Brown, Sec. 1, Blk. 6, T. & P. Sur. ..... Spudded and shut down.
W. E. Halbert et al's No. 1 Hunt, C SE Sec. 124, Blk. 64, H. & T. C. Sur. ..... Shut down 1,960 ft.
Humble O. & R. Co.'s No. 1 Mattie Jacobs, Sec. 1, Nabors Sur. ..... Drilling 2,530 ft.
Morrison & Thompson's No. 1 Mrs. Alice Rose, SW cor. NE Sec. 29, Blk. 19, T. & P. Sur., elev. 1,925 ft. ..... Shut down 2,540 ft.
Owen & Sloan's No. 1 Lattimer, Sec. 14, Blk. 9, T. & P. Sur. ..... Total depth 2,275 ft.; underreaming 8-in.
Roeser & Pendleton's No. 1 Sam Hutman, C W ½ NW Sec. 64, Blk. 5, T. & P. Sur. ..... Total depth 840 ft.; underreaming 12-in.
Sanger O. & R. Co.'s No. 1 Ike Brown, NE cor. Sec. 54, Blind Asylum Land ..... Drilling 2,250 ft.
Sanger O. & R. Co.'s No. 1 Stem ..... Location.
World Oil Co.'s No. 1 J. R. Griffith, SW cor. NE Sec. 32, Blind Asylum Land, elev. 1,747 ft. ..... Drilling 2,875 ft.; water at 2,850 ft.

TERRY COUNTY

Kingsland Oil & Potash Co.'s No. 1 Brownsfield, C NW SW SW Sec. 7, Blk. 1-A, E. L. & R. R. Sur. ..... Fishing for 10-in. 1,235 ft.

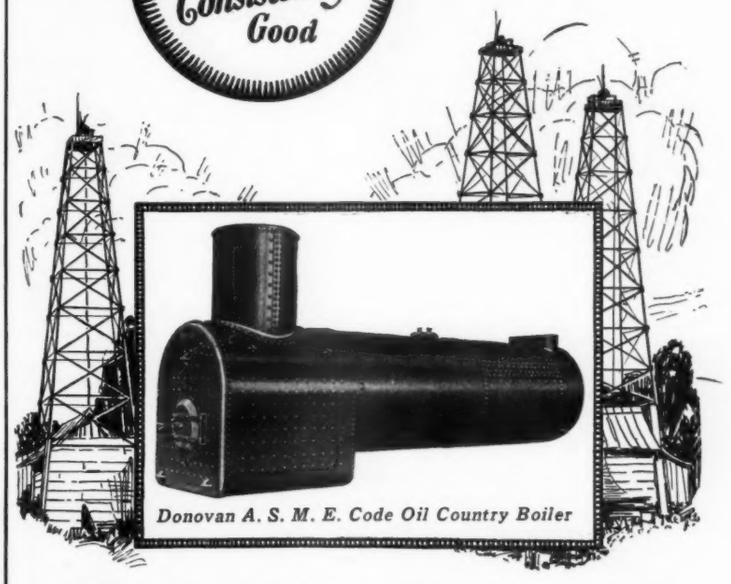
TOM GREEN COUNTY

Camp's No. 1 H. D. Wilkey, Sec. 4, B. A. L. Sur. ..... Shut down 670 ft.
Fitzgerald et al's No. 1 Bennett ..... Drilling 600 ft.
Marland Oil Co.'s No. 1 Llano, 3,500 ft. S and 13,000 ft. W of NE cor. Llano Co. School Land No. 964 ... Total depth, 3,195 ft.; underreaming and cleaning out.
Tulsa Oil Co.'s No. 1 Adams, C SW Sec. 162, Blk. 11, S. P. R. R. Sur. ..... Spudding.

UPTON COUNTY

Hults et al's No. 1 Giddings, C Sub. Sec. 12, Throckmorton Co. School Land, elev. 2,761 ft. ..... Top salt, 1,515 ft.; drilling 3,615 ft.
Hults et al's No. 2 Giddings, 5,336 ft. S and 6,678 ft. E of NW cor. Throckmorton Co. School Land, leauge 1. . Rig; drilling water well.
Levi Smith and Marland's No. 1 University, C E ½ Sec. 17, Blk. 5, University Land ..... Hole full salt water 630-40 ft.; drilling 670 ft.
Marland Oil Co.'s No. 3 Burleson, T. C. Jones Sur. No. 100 ..... First pay 2,205 ft.; second pay 2,295 ft.; 2,000 ft. sulphur water 3,390-95 ft.; 1,000 ft. sulphur water 4,135 ft.; drilling 4,592 ft.
Marland Oil Co.'s No. 34 Burleson, Sec. 100, T. C. Jones Sur. ..... Shut down 3,255 ft.
Simms Oil Co.'s No. 1 B. C. Clark, NE cor. SW, Sec. 5, G. C. & S. F. Sur., elev. 2,473 ft. ..... Top salt 470 ft.; top lime 1,718 ft.; sulphur water 1,834-50 ft.; fishing 2,205 ft.

Donovan Boilers are Consistently Good



Donovan A. S. M. E. Code Oil Country Boiler

Chosen by experienced boiler users for—

Ability to Deliver the Goods

DONOVAN boilers were first used in West Virginia. Now they are used in practically all the world's fields.

The first DONOVAN was 25 Horse Power 100 lb. W.P. Now they are made up to 95 H.P.—175 lb. W.P.

The first DONOVANS used were on shallow wells. Now they are used on the world's deepest wells.

The first DONOVANS were used by one individual. Now the largest and most successful oil companies and operators, and the oldest and most experienced contractors use DONOVANS.

Donovan boilers have grown and developed with the oil industry. They are designed to meet the varying needs of the oil country.

DONOVANS have always delivered the goods and may be relied upon to continue to do so.

Manufactured by

DONOVAN BOILER WORKS, INC.

PARKERSBURG, W. VA.

NEW YORK OFFICE—30 Church Street

FRICK-REID SUPPLY COMPANY
Mid-Continent Distributors

GREAT NORTHERN TOOL & SUPPLY CO
MIDLAND IRON WORKS
Montana Distributors

All Leading Supply Houses Throughout the Eastern Fields Handle

DONOVAN QUALITY PRODUCTS

NONE BETTER

Mebby So

White man comes makem rig up on hill and starts to dig.
Injun watchem white man toil—
Think heem driller heap big fool
Sets all day on a pine stool.
Toolie swingem heap big wrench then goes sleep on greasy bench.
Nite time comes, no go to bed nother outfit come instead.
Never stoppem. Work like hell; thats the way they drillem well.
Driller get heap big pay, cashem check and go away.
Oil still flows in big steel tank,
Me gottem money in the bank,
Buy a car and come down road—turn out to let bridge go by, break him quick.
Leave the dam thing in the crick.
Buy two more and mebby three, one for squaw and two for me.
Buy papoose a pair of shoes, spend whats left on wildcat booze.
Have good time but go to jail, good friend comes and goesum bail.
Banker says my money gone, heap big fool—
Bye and bye some more come on.
That's the way the oil game goes.
White man getsum, Injun blowsem.
Me think driller heap dam fool, sets all day on old pine stool.

Mebby So—but no driller has ever been made a fool of by a Shaffer Gauge Cock, they swear by them—not at them. Nowhere will you get more value for your money, get a set today at your supply store and save your cussing for something else that needs it—your Shaffer Gauges won't.

J. E. SHAFFER CO.
316 Mid-Continent Bldg.
Tulsa, Oklahoma

Price $2.25

All Parts Are Interchangeable

Made in two sizes, ½ or ¾-inch Furnished with combination fibre wheels or a special all-metal wheel for strong alkali water. Extra wheels 25c each.

SHAFFER
The Standard Boiler Gauge Cock

Wise & Jackson's No. 1 J. H. Porter, SW cor. SW SW Sec. 184, Blk. E ..... Rig.

VAL VERDE COUNTY

A. Blume et al's No. 1 Moore est., Sec. 183, J. Mitchell Sur. ..... Shut down 3,000 ft.
Curso Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G. H. & S. A. Sur. ..... Fishing 2,940 ft.
Douglas Oil Co.'s No. 1 Sellars, C SE Sec. 82, Blk. A, I. & G. N. Sur. ..... Total depth 3,020 ft.; rig rebuilt
East Del Rio Oil Co.'s No. 1 Russell, SE cor. Sec. 183, Del Rio Town Sur. ..... Shut down 3,190 ft.; 25,000 ft gas.
Hiawatha Oil Co.'s No. 1 Sellars, C Sec. 1,031, Blk. A, I. & G. N. Sur. ..... Hole full salt water 2,455 ft.; drilling 2,800 ft.; lime.
Magnolia Petroleum Co.'s No. 1 Whitehead, Sec. 81, Blk. D, G. C. & S. F. Sur. ..... Shut down 610 ft.; lime.
Independent Operators' No. 1 Whitehead, SE NE Sec. 20, Blk. 4, I. & G. N. Sur. ..... Shut down 3,900 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I. & G. N. Sur. ..... Flowing sulphur water 2,300-25 ft.; making 3,000,000 ft. gas with good gasoline content 2,491-2,502 ft.

WARD COUNTY

Marland Oil Co.'s No. 1 J. Sealey, C SE Sec. 78, Blk. A, G. M. M. & A. Sur., elev. 2,820 ft. ..... Hole full fresh water 970-80 ft.; top salt 1,100 ft.; hole full sulphur water 3,245-48 ft.; run 6-in. 3,294 ft.; total depth 3,506 ft.; 8-in. parted; fishing.

WINKLER COUNTY

Atlantic O. P. Co.'s No. 1 Hendricks, Sec. 34, Blk. B-5, elev. 2,823 ft. ..... Drilling 1,465 ft.
Champlin Drilling Co.'s No. 1 C. W. Cowden, C SW Sec. 21, Blk. C-23, Public School Land, elev. 2,889 ft. ..... Hole full water 2,385 ft.; drilling 2,525 ft.
Group 1 Humble O. & R. Co.'s No. 1 T. G. Hendricks, C SE Sec. 36, Blk. 27, elev. 2,822 ft. ..... Total depth 1,015 ft.; underreaming 8-in.
Humble O. & R. Co.'s No. 1 T. G. Hendricks, S and W NE cor. W ½ NE Sec. 33, Blk. B-5, Public School Land ..... Drilling 1,330 ft.
Independent O. & G. Co.'s No. 2 Hendricks-A, elev. 2,816 ft. ..... Top salt 1,785 ft.; drilling 1,900 ft.
Independent O. & G. Co.'s No. 2 Hendricks-A, elev. 2,822 ft. ..... Drilling 790 ft.
McCullough Oil Co.'s No. 1 Tobe Morton, CEL Sec. 29, Blk. L-12, Public School Land, elev. 2,750 ft. ..... Hole full salt water 1,940 ft.; shut down 2,010 ft.
R. S. Matthews et al's No. 1 State, C Sec. 7, Blk. A-37, Public School Land Sur., elev. 3,120 ft. ..... Drilling 1,180 ft.
Pure Oil Co.'s No. 1 Hendricks, SW cor. Sec. 41, Blk. B-5, Public School Land, elev. 2,823 ft. ..... Drilling 1,610 ft.
Pure Oil Co.'s No. 2 Hendricks, elev. 2,827 ft. ..... Top salt 1,518 ft.; top lime 2,390 ft.; cemented 8-in. 2,479 ft. and standardizing.
Roxana Petroleum Corp. and Llano Oil Co.'s No. 1 Scarborough, C Sec. 1, Blk. C-22, Public School Land, elev. 2,921 ft. ..... Top salt 1,115 ft.; hole full water 1,321 ft.; 10-in. set 1,570 ft.; top pay 2,990 ft.; second pay 3,124-28 ft.; filled up 2,700 ft. and swabbed 65 bbls. oil and 125 bbls. bs. very little gas; oil tests 38.8°; drilling 3,208 ft.; gray lime; 700 ft. oil in hole.
Skelly Oil Co.'s No. 1 M. M. Leeman, 1,320 ft. E of SW cor. Sec. 21, Blk. 75, elev. 2,951 ft. ..... Top salt 1,167 ft.; drilling 4,965 ft.; lime and anhydrite.
Southern Crude Oil Pur. Co.'s No. 3-C Hendricks, SE cor. NE Sec. 33, Blk. B-5, elev. 2,816 ft. ..... Top salt 1,870 ft.; little gas 2,630-40 ft.; shut down for orders 2,735 ft.; making 2,000,000 ft. gas and 1 bbl. oil; top lime 2,630 ft.
Southern Crude Oil Pur. Co.'s No. 4-C Hendricks ..... Cementing 8-in. 2,525 ft. and shut down.
Southern Crude Oil Pur. Co.'s No. 1 Hendricks A-1, SE cor. NE Sec. 44, Blk. 26, elev. 2,854 ft. ..... Cementing 8-in. 2,371 ft.; top salt 1,907 ft.; drilling salt 2,475 ft.
Southern Crude Oil Pur. Co.'s No. 1 Hendricks-D, SE cor. NE NW Sec. 4, Blk. B-12. ..... Rigging up rotary.
Southern Crude Oil Pur. Co.'s No. 1-F Hendricks, Sec. 33, Blk. B-5, NE cor. SE. ..... Drilling 1,300 ft.
Texon O. & L. Co.'s No. 1 Central State Bank, SW cor. W ½ SE Sec. 41, Blk. B-5, elev. 2,826 ft. ..... Top salt 1,610 ft.; drilling 2,135 ft.
White Eagle O. & R. Co.'s (was Gibson & Johnson's) No. 1 R. A. Lock, 1,320 ft. W of NE cor. Sec. 30, Blk. 74, NW of discovery well, elev. 2,830 ft. ..... Drilling 1,470 ft.

PANHANDLE FIELDS

(Continued from Page 40)

& Morris Survey, was dry and abandoned at 4,600 feet in hard gypsum.

Hutchinson County

Colorado Eastern Oil Co. abandoned the location for No. 6 Johnson, Section 6, Block Y, A. & B. Survey. Locations were temporarily abandoned for Coble Oil & Development Co.'s Nos. 2 and 3 Tom Lewis, Section 6, Block 23, B. S. & F. Survey. Phillips Petroleum Co.'s No. 16 Martin, Section 1, Block XO2, H. & O. B. Survey, was shot with 140 quarts at 2,927-77 feet and completed as a 150-bbl. well. The well made 50 bbls. before the shot. Phillips Petroleum Co.'s No. 10 Tinnie, Section 71, Block 46, H. & T. C. Survey, made 1,200 bbls. the first 24 hours after a 120-quart shot at 2,818-60 feet. Phillips Petroleum Co. and Gibson's No. 18 Patton, M. Whitley Survey, was drilled to 2,986 feet and plugged back to 2,933 feet. The well was shot with 150 quarts at 2,880 to 2,933 feet and completed as a 10-bbl. well. Skiatex Oil Co.'s No. 8 Kingsland, Section 6, Block Y, M. & C. Survey, was shot with 450 quarts at 2,760 to 2,860 feet feet and completed for a 410-bbl. well. Travelers Oil Co.'s No. 4 Kingsland, Section 6, Block Y, M. & C. Survey, was shot with 230 quarts at 2,950 to 3,023 feet and completed as a 700-bbl. well.

Wheeler County

Fain and associates' No. 2 Binkley Cain, Section 55, Block 24, is a temporarily abandoned location. Gibson Oil Corp.'s No. 2 Bentley, Section 42, Block 24, H. & G. N. Survey, which was a 50-bbl. well at 2,351 feet, was increased to a 275-bbl. well by agitating. Lone Star Gas Co.'s No. 1 Morgan, Section 93, Block 17, H. & G. N. Survey, was completed as a 28,000,000-foot gas well at 1,926 feet.

CALIFORNIA SITUATION IS MUCH IMPROVED

(Continued from Page 29)

furnish fair and short-lived production starting some time in July, but it is believed that it will cause only a temporary oscillation on the general decline curve.

The California situation has been reviewed by the present writer in previous articles, and there seems little to be added at this time regarding production in 1927. The State is waiting the outcome at Seminole in the Mid-Continent, and the marketability and price of California crude and refined products now depends chiefly upon that factor. The general decline in California production mentioned by the writer last month will probably continue with minor oscillations, unless the curve is sustained by an opening up of the oil which has been shut in. There is some 30,000 bbls. of light oil shut in at present, and perhaps twice this amount of heavy oil.

It appears likely that crude production in California will slowly decline, but will remain above 600,000 bbls. daily for at least most of the year 1927. The actual figures depend to a large extent upon the national outlook.

FARMINGTON, N. MEX.

(Continued from Page 34)

ture in McKinley County was on top of the producing sand when the storm started, but the condition of the roads has prevented a later report reaching here.

Kutz Canon

The Standard rig of the Senate Oil Co. is expected to arrive as soon as road conditions permit and will be set up for deepening the Congress-National well in the Kutz Canon district, Section 34-29-11. As soon as this is completed it will be used in other tests.

The bridge going out at Blanco will delay operations at the Union Oil & Mining Co. well, where a fishing job has been on for several months. It will be a few days before anything definite can be learned as to the work there.

The Huntington Park Petroleum Corp. has part of the material for a steel rig on the ground in the Blanco district, and is fortunate in having acreage on the north side of the San Juan River so the bridge going out will not affect it. It will drill on Section 29-30-9.

The Mary O'Bryan permit on the proclamation strip is being surveyed this week preparatory to drilling. It will be drilled by T. B. Stalnaker, who has producing wells in West Virginia and Kentucky. He has been here twice and has gone over the acreage, and believes it good. He will go down 4,000 or 5,000 feet if necessary.

GEOPHYSICAL TESTS WILL BE MADE BY GOVERNMENT

DENVER, Colo., July 2.—The first experiments in the use of geophysical methods of determining underground properties to be undertaken by the Government will take place in Colorado during July and August under the auspices of the United States Bureau of Mines. Information that such experiments were planned became known here this week when Dr. A. S. Eves and Dr. D. A. Keyes, of Montreal, Canada, arrived in the city to join Dr. A. C. Heiland, of the Colorado School of Mines, and Edward H. Denny, of the Denver office of the Bureau of Mines. The party proceeded to Boulder County where the experiments are to be conducted.

The use of geophysical instruments in locating structures for testing for oil will not be attempted in the present investigations, but the data compiled and the results secured are expected to have a direct bearing on the use of the new methods for that purpose. The work to be undertaken this summer is confined to a comparatively small mineralized area known as Caribou Mountain near the city of Boulder. The Caribou district is one of the oldest mining districts in Colorado and in its younger days had a record of around $1,000,000 a year in the output of gold and silver. In recent years the district has not been worked to any great extent, but it is generally believed that it would again become a large producer if the mineralized veins in which the values had pinched out in the old workings could be relocated. It affords an ideal condition for experimenting with the new method.

BIG LEASE TRANSACTION

A lease transaction in the newly found Little River Pool, 3 miles south of Bowlegs in the Greater Seminole area of Oklahoma, was announced on Tuesday of this week when the Blackwell Oil & Gas Co. of Blackwell, Okla., purchased from the Gladys-Belle Oil Co. the latter concern's lease diagonally offsetting the Indian Territory Illuminating Oil Co.'s No. 1 Dickson, in Section 1-7-6. The lease described as the east half of the southeast quarter of Section 33-8-6, is said to have brought over a million dollars, the better part of which was paid in cash, and the remainder in oil.

The "Free" Jack Squib Blew up His Well!

The Operator Wanted to Save the Cost of a Zero Hour Bomb

A West Texas operator recently desired to shoot his well with several hundred quarts of nitro. Casing was set close to the top of the pay sand.

The shooter recommended using a Zero Hour Bomb so that casing could be lifted a safe distance after placing, and before exploding, the shot. A jack squib could not be used if casing were lifted, because cavings would bury the shot, making the jack ineffective.

But the operator wanted to put off the shot with a jack squib because the jack cost nothing additional. To save the price of a bomb, he was willing to risk the string of casing, and even his well.

Reluctantly acceding to the operator's wishes, the shooter placed the shot and dropped a jack. The explosion of the big shot blew up the casing and plugged the well.

The One Jack Has Already Cost Him Thousands of Dollars

After casing and drilling crews had worked for 12 days, it was reported that they had hopes of saving the well. But the use of the jack squib had already cost the owner more than $2,000 in labor alone—and the expense was far from ended.

A Zero Hour Bomb Would Have Put Off This Shot SAFELY

This operator could have put off his shot with a Zero Hour Electric Bomb without endangering the well. For the bomb would have allowed ample time to pull the casing out of danger after shot and bomb were placed, and before they exploded. Cavings would not have affected its operation.

Because the Zero Hour Electric Bomb has introduced the element of *certainty* into the shooting of costly wells, a large number of the major operators have abandoned uncertain and dangerous detonators and have standardized on Zero Hour shooting for ALL wells.

Zero Hour cannot explode until the hour hand of a sturdy and accurate watch makes contact with the firing pin at the "zero hour." The Zero Hour Electric Bomb functions dependably under any conditions of heat, pressure, magnetic influence or presence of cavings.

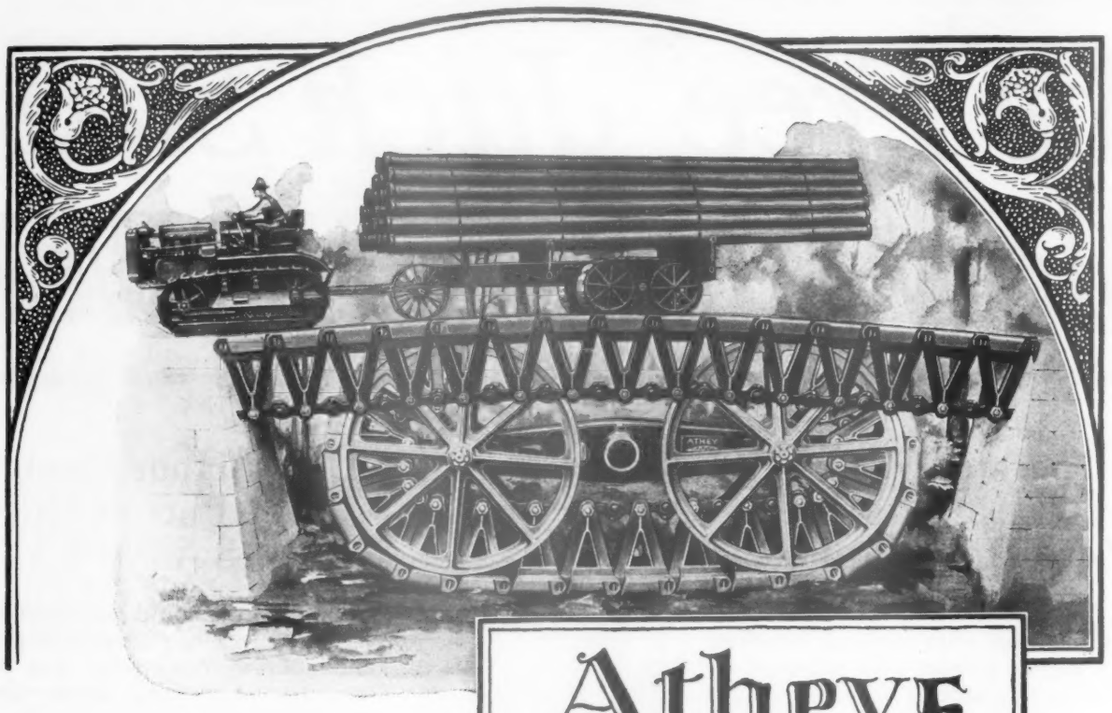
The Zero Hour Electric Bomb can be secured through all principal torpedo companies. The advice of our engineering and shooting staff is yours for the asking.

ZERO HOUR TORPEDO CO.
408 Cosden Building, Tulsa, Okla.
Day Phone 2-9612
Night Phones 3-1775, 3-7650, 2-6097

BORGER, TEXAS
Howard Culp
Phone 254
P. O. Box 411

SEMINOLE, OKLA.
Geo. Pascoe
Phone 410
518 Second St.

Zero Hour
Electric Bomb



Atheys
Bridge the Soft Spots

The Athey Truss Wheel is a track-laying wheel of special construction, ideally adapted as a load-carrying wheel for transporting heavy loads over ground that is SOFT, sandy, or deeply covered with rotten vegetation.

Nine square feet of ground contact provided by a pair of wide, rigid steel tracks, support capacity loads wherever animals or tractors can work. Atheys carry the load OVER the mud—not through it.

Athey Truss Wheels make their own roads by compressing the soil into a firm roadway instead of cutting big ruts and deepening mud holes. *They Bridge the Soft Spots.*

With Athey Truss Wheel Wagons you can haul maximum 10-ton loads under all operating conditions, operate with 30% to 50% less tractive power, reduce tractor operating and maintenance costs, eliminate operating delays, increase number of working days and carry capacity loads where other equipment cannot work. Athey Wagons pay substantial dividends.

Let us tell you more about them.

ATHEY TRUSS WHEEL CO.
130 No. Wells Street, Chicago, U. S. A.
Cable Address: "Trusswheel, Chicago"
The Baldwin Locomotive Works,
Foreign Representatives,
Philadelphia, Pa.

ATHEY TRUSS WHEEL WAGON
IT BRIDGES THE SOFT SPOTS

INCREASED FACILITIES AND STOCKS IN 50 PER CENT GAIN IN ASSETS

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, July 2. — Since 1920, the year of record crude oil and refined oil prices, the petroleum industry of the United States has made remarkable strides, although at present conditions seem to be less favorable, for the moment, than at the close of 1920. Mid-Continent crude oil at the close of 1926 was about $2.25 a barrel at the well against $3.50 at the close of 1920; tank wagon gasoline in New York was 31 cents at the close of 1920, compared with 22 cents at the end of 1926.

Total assets of 40 of the largest petroleum companies in the United States as of December 31, 1926, aggregated $7,614,028,000, against $5,086,516,000 at the end of 1920, an increase of $2,527,512,000, or 49.6 per cent. This gain of more than 2,500,000,000 in oil company assets represents more than anything else increased facilities and larger stocks of crude and refined oil on hand, for the 40 companies included in the compilation. A gain of 50 per cent in assets of any industry in a period of six years is a record to be proud of.

The 40 companies included in the compilation are 20 Standard Oil companies and 20 independent companies, and are in the aggregate representative of at least 80 per cent, if not more, of the total oil industry assets of the United States and about 50 per cent of the assets of the oil industry outside of the United States. The figures used are from the balance sheets of the companies for the years mentioned.

The compilation shows that the gain in assets of the 20 independent oil companies has amounted to $963,496,000, or 42.5 per cent, while that of the 20 Standard Oils has amounted to $1,564,016,000, or 55.4 per cent. In the period stated the assets of the Standard companies were increased in part by the acquisition of either 100 per cent interest or else control of six large independent companies, whose aggregate assets on December 31, 1920, were $535,569,000 These companies, with their capitalization funded debt and assets as of December 31, 1920, are as follows:

	Capitalization	Funded Debt	Assets
General Petroleum	$ 27,256,000	$ 2,920,000	$ 47,385,000
Pacific Oil	52,500,000	.....	81,157,000
Magnolia Petroleum	126,113,000	8,762,000	193,620,000
Pan American P. & T.	$2,169,000	11,992,000	103,121,000
Midwest Refining	31,204,000	.....	77,496,000
Producers & Refiners	19,966,000	3,000,000	32,790,000
Total	$339,208,000	$ 26,674,000	$535,569,000

These six companies, of course, are not included in the list of 20 independents, either for 1920 or 1926.

Capitalization

The total capitalization of the 40 oil companies on December 31, 1926, was $4,152,761,000, compared with $2,178,568,000 on December 31, 1920, an increase of $1,974,193,000, or 90 per cent.

This comparatively large gain in capitalization is accounted for principally by the declaration of stock dividends by many Standard Oil units. These units were undercapitalized in 1920, the total capitalization of the 20 Standard Oils being $795,338,000 against assets of $2,820,610,000 in 1920. The same Standard companies at the close of 1926 had a total capitalization of $2,385,300,000, an increase of 199.9 per cent over 1920, while the assets had increased in 1926 to $4,384,626,000.

The funded debt of the 40 oil companies on December 31, 1926, aggregated $452,787,000, compared with $195,168,000 at the end of 1920, an increase of $257,619,000. This increase measures in part the public financing accomplished by the various oil units in connection with the expansion which took place in the six-year period. The large percentage increase in funded debt of the 20 Standard Oils is explained by the exceptionally small amount outstanding at the close of 1920, amounting only to $27,551,000.

The following table shows the aggregate capitalization, funded debt and assets of the 40 oil companies, divided as between 20 Standards and 20 independents, at the close of the years indicated, with increase (last 000 omitted.)

	1926	1920	Increase	Per Cent
	Capitalization			
Twenty independents	$1,767,461	$1,383,230	$ 384,231	27.7
Twenty Standards	2,385,300	795,338	1,589,962	199.9
Total	$4,152,761	$2,178,568	$1,974,193	90.6
	Funded Debt			
Twenty independents	$ 259,350	$ 167,617	$ 91,733	55.3
Twenty Standards	193,437	27,551	165,886	620.1
Total	$ 452,787	$ 195,168	$ 257,619	131.9
	Assets			
Twenty independents	$3,229,402	$2,265,906	$ 963,496	42.5
Twenty Standards	4,384,626	2,820,610	1,564,016	55.4
Total	$7,614,028	$5,086,516	$2,527,512	49.6

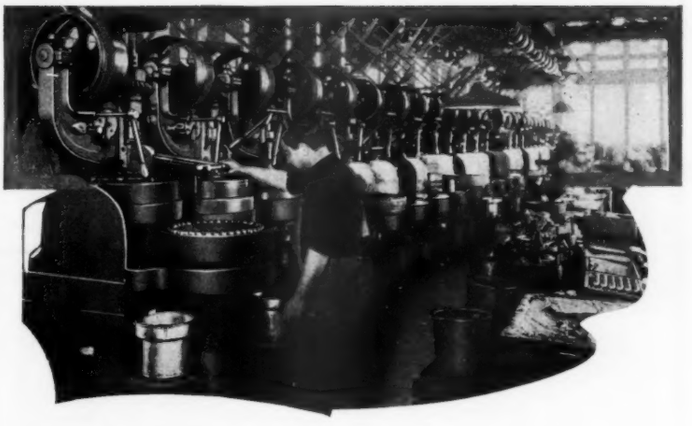
The following table shows detailed figures by companies. The figures for capitalization represent par value of stocks and bonds outstanding, and where a common stock has no par, the figures used in the company balance sheet are given (last 000 omitted):

Twenty Independent Oil Companies

	Capitalization		Funded Debt		Assets	
	1926	1920	1926	1920	1926	1920
Barnsdall Corp.	$54,629	*$27,326	$25,913	*$10,612	$71,190	*$39,439
California Petroleum	67,968	26,483	18,470	867	97,623	35,172
Houston Oil	41,020	*23,916	7,104	*	50,268	*38,179
Marland Oil	74,763	*52,256	.....	*3,785	137,154	*64,317
Mexican Seaboard	10,010	16,983	3,500	10,700	13,573	22,535
Mid-Continent Pet.	58,281	31,917	10,969	7,773	84,065	71,176
Phillips Petroleum	105,367	†41,660	.....	†3,336	166,274	†63,812
Pure Oil	‡108,890	$77,331	$9,931	$13,069	‡232,076	$135,830
Simms Petroleum	10,297	7,239	3,431	599	20,060	18,431
Sinclair Consolidated	307,381	239,982	85,756	47,504	364,817	354,506
Skelly Oil	29,581	*17,739	2,293	* ...	72,864	*30,716
Superior Oil	8,780	17,819	462	.....	6,797	18,596
The Texas Company	164,460	175,749	.....	32,749	432,386	333,424
Texas Pacific C. & O. Co.	8,448	8,282	.....	.....	35,306	37,154
Transcontinental Oil	47,300	196,772	56,652	.....	52,830	204,330
Union Oil of California	117,155	59,245	22,440	9,245	326,126	101,905
White Eagle Oil	16,707	*7,615	2,000	*	29,865	*12,301
Gulf Oil	149,271	54,245	38,904	18,100	499,337	259,729
Tide Water Associated	168,785	88,759	21,525	9,278	247,160	176,884
Shell Union Oil	218,378	*201,912	.....	*	289,731	*217,470
Total	$1,767,461	$1,383,230	$259,350	$167,617	$3,229,402	$2,265,906

Twenty Standard Oil Companies

	Capitalization		Funded Debt		Assets	
	1926	1920	1926	1920	1926	1920
Anglo-American Oil	$26,216	$30,000	$6,180	$15,000	$83,104	$110,120
Atlantic Refining	87,554	25,051	17,554	51	140,272	115,520
Continental Oil	37,241	*10,000	1,436	*	83,332	*15,818
Ohio Oil	60,267	15,000	267	.....	107,669	90,515
Prairie Oil & Gas	60,000	18,000	.....	.....	167,971	153,076
Solar Refining	4,000	2,000	.....	.....	8,305	8,516
Standard of California	214,852	99,373	.....	.....	573,803	245,755
Standard of Indiana	228,415	88,038	.....	.....	446,496	237,534



OIL GRINDING—Another Quality Step In Making Hoover Steel Balls

HOOVER Steel Balls, of the larger sizes, after going through the forging, rough grinding, heat treatment and Hoffman grinding operations, finally come to the oil grinding machines, which reduce the balls to their eventual perfect size.

The illustration above shows the grooved rings in which the balls are revolved in a compound of oil and an extremely gentle abrasive medium, which laps and polishes the balls down to size and removes the coarser grinding marks from previous operations.

Each machine is equipped with a multiplying dial indicator, similar to the face of a clock, so that the rate at which the balls are approaching exact size is signalled to the operator. This dial is set according to a master ball approved by the U. S. Bureau of Standards as perfect, and the machine is so regulated that it ceases to grind or lap when the dial reaches the exact setting.

So the operator checks and watches the mechanical exactness of the machine and errors cannot occur.

If it were possible to produce better steel balls, Hoover would spare neither time nor expense to do it. And if, in the future, there are to be new processes developed, it is reasonably safe to assume that Hoover will be in the vanguard.

What Does This All Mean to the Oil Industry?

Out of millions of Hoover Balls used in working barrels during the past six years, not a single one has given cause for complaint. Evidence like this means something. Hoover check valve balls wear and wear—*and wear.*

This is tenth of a series of stories describing the manufacture of Hoover Balls

Hoover Steel Ball Company

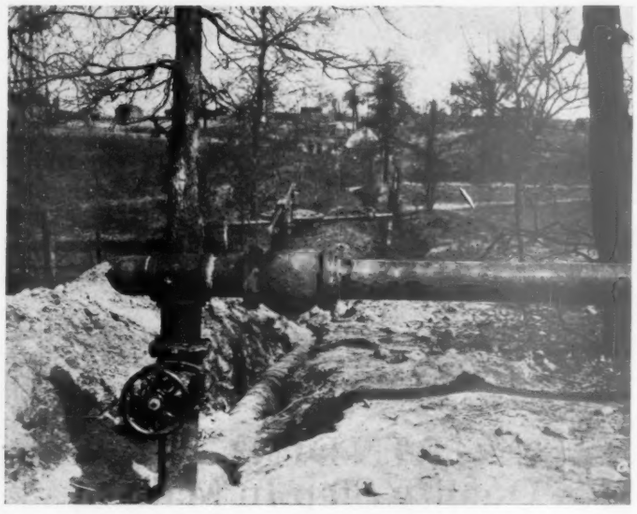
Ann Arbor, Mich., U. S. A.

Chicago, 1901 Mallers Bldg. *Philadelphia, Liberty Trust Bldg.*

HOOVER METAL BALLS

STEEL · BRONZE · MONEL METAL STAINLESS STEEL BALLS

SPIRAL *and* TAPERED ROLLER BEARINGS *for* AUTOMOTIVE *and* INDUSTRIAL USES



Independent vacuum control for each well

VACUUM control with the Davis Casing Head Gas Regulator allows a number of wells to be operated from one station, with an automatic regulation of the proper vacuum on each well. A great many of the largest producers have adopted the Davis Regulator as standard equipment for this service.

Simplicity and sound design insure accuracy and the utmost economy in the operation of the Davis Regulator. There is only one internal moving part,—the balanced disc which is connected to the diaphragm. Diaphragm size is the same for all regulators, from 2 to 8 inch sizes, and the diaphragm chambers are interchangeable.

Where unusually accurate regulation is desired an equalized control vacuum may be taken from the line a short distance from the valve. The valve body and the diaphragm are separated, which allows this method of sensitive control.

Our engineers can help you get the most in service from valve specialties. Consult them on any problems of application to individual conditions.

G. M. DAVIS REGULATOR CO.
409 Milwaukee Avenue,
CHICAGO, ILLINOIS

WESTCOTT & GREIS, Inc.
Sales Engineers
TULSA LOS ANGELES DALLAS

DAVIS VALVE
STEAM SAVERS SINCE 1875
SPECIALTIES

O&GJ 7-7-Gray

	Capitalization		Funded Debt		Assets	
	1926	1920	1926	1920	1926	1920
Standard of Kansas	8,000	2,000	.....	.....	11,540	12,357
Standard of Kentucky	17,012	6,000	.....	.....	50,707	23,382
Standard of Nebraska	4,559	1,000	.....	.....	7,263	5,384
Standard of New Jersey	837,370	295,014	120,000	.....	1,541,946	1,102,312
Standard of New York	455,248	75,000	35,000	.....	691,211	347,949
Standard of Ohio	21,000	14,000	.....	.....	54,883	38,159
Vacuum Oil	62,470	15,000	.....	.....	141,520	99,092
Buckeye Pipe Line	10,000	10,000	.....	.....	25,436	27,080
Illinois Pipe Line	20,000	20,000	.....	.....	39,014	24,192
National Transit	6,362	*6,362	.....	*	14,068	*18,055
Prairie Pipe Line	81,000	*27,000	.....	*	148,321	*96,279
Union Tank Car	43,734	36,500	13,000	12,500	47,765	49,420
Total	$2,385,300	$795,338	$193,437	$27,551	$4,384,626	$2,820,610

*As of December 31, 1921; 1920 figures not available.
†As of December 31, 1922; earliest available.
‡As of March 31, 1927.
§As of March 31, 1921.

CENTRAL WEST FIELDS

(Continued from Page 58)

Lot 32, Strongville Township, Cuyahoga County, in the Cleveland Field. Hulse & Kundtz are drilling a second test in the northwest corner of the G. H. Barnum 18 acres, Lot 31, Olmstead Township, same county.

Indiana

A sensational strike was made by Mann & Huber in their test in the southwest corner of the David Hutchinson farm in the NE of Section 13, Center Township, Gibson County, in southwestern Indiana. Top of sand was found at 1,399 feet and drilled 19 feet in the sand, responding with an initial flow of 225 bbls., making it the best producer uncovered in Indiana for many days. During May, Joe S. Young, Jr., and others brought in a 150-bbl. natural producer on the D. Jenkins farm, same section, and it looks as though a rich pool has been uncovered. In Washington Township, same county, William Bell and others are drilling a second test on the Frank Thompson farm, where a 35-bbl. well was recently brought in, and the Ohio Oil Co. is drilling a second test on the Dora Edwards farm, Section 2, same township.

In Clay Township, Pike County, A. B. Bement abandoned his No. 2 well on the Eldon Catt farm, Lot 13, that made a nice showing, but was drowned out by water.

The next best find in the Indiana regions was made by the Siosi Oil Corp. in No. 2 on the J. R. Thomas farm, Section 6, Fairbanks Township, Sullivan County, producing 60 bbls. initial at a depth of 2,105 feet. This well is near the line between Sullivan and Vigo Counties, and on the same lease that a sensational well was uncovered a few months ago and caused a rush for leases. The oil is of a very high gravity, almost gasoline. No. 3, same farm, is under way. In Turman Township, same county, the W. C. Kennedy Co.'s No. 19 on the Lafayette Dix farm, Section 1, proved a duster.

Eastern Indiana

In the old Trenton Rock area of eastern Indiana, in Bear Creek Township, Jay County, the Waterloo Oil & Gas Co.'s No. 5 on the C. E. Brinkerhoff, Section 12, produced 15 bbls. initial. In Wabash Township, the Moore-Tex Oil Co. abandoned No. 1 on the William Kelly farm. In Penn Township, same county, the A. O. P. Oil Co.'s No. 6 on the N. Thomas farm, Section 21, pumped 2 bbls., while the Twin Hills Oil Co.'s No. 1 on the J. E. Gardner farm, Section 24, was dry.

In Monroe Township, Adams County, the Rechard Petroleum Co.'s second well, 200 feet from the south line and 660 from the east line of the Stengle & Craig 90-acre farm, in the W half of the NW of Section 36, pumped 15 bbls. In Hartford Township, the Richberne Oil & Gas Co.'s No. 1 on the A. Egly farm, Section 13, pumped 3 bbls. In Blue Creek Township, same county, the Paul Schulte Oil & Gas Co.'s No. 4 George Shrank, Section 20, pumped 3 bbls., and No. 1 of the same company on the J. M. Goss farm, Section 29, was dry.

Lewis Oil Co. is drilling No. 11 on the J. K. Davis farm, Section 20, Salamonie Township, Huntington County.

Illinois

A very nice find was made in the old defined territory of Lawrence County, Illinois, when the Silurian Oil Co. drilled in its No. 18 in the southwest corner of the William Ross farm, in the NW of Section 29, Petty Township, the well having an initial natural production of 75 bbls. from the McCloskey sand at from 1,820 to 1,858 feet. In Dennison Township, the Ohio Oil Co. is drilling No. 19 on the Laura J. Jenner 141 acres, Section 27. Harry Gordon is drilling a wildcat on the C. Caudel farm in the NW of Section 36, Christy Township, same county.

In the Allendale Field of Wabash Township, Wabash County, Joe S. Young, Jr., and others' No. 1 in the SE cor. of the John Barney heirs farm in the NW of Section 1, is credited with an initial production of 15 bbls. from a sand topped at 1,370 feet and drilled 25 feet in the sand. Same concern is starting a test on the A. Tanguary heirs farm, Section 35, and the Max Oil Co. is starting No. 8 on the Holson-Dorney property, Section 18.

Mt. Vernon Development Co. is drilling a wildcat on the Albert Sebastian farm, in the northeast quarter of Section 27, Carrigan Township, Marion County. The Ohio Oil Co. is drilling a deep test on the M. A. Thompson farm, Stratton Township, Edgar County, and Henderson Brothers are working on a wildcat on the A. and R. Wilhoit farm in Kansas Township, same county.

Cumberland Oil Co. is drilling a test on the L. Roberts farm, Section 11, Union Township, Cumberland County, and E. A. Ruedy and others are drilling a test on the E. Robey farm, Section 16. In Sumpter Township, same county, Shrider and others are putting down a test on the S. Conel farm, Section 24. John Phipps and others are drilling No. 2 on the Phillip Young heirs farm, Section 10, Honey Creek Township, Crawford County.

EASTERN FIELDS

(Continued from Page 60)

On Mayberry Run, Murphy district, Ritchie County, the Daniel O'Day estate and others are spudding in a test on the Daugherty heirs' farm. On Arnolds Creek, Central district, Doddridge County, the Pittsburgh & West Virginia Gas Co. is drilling down from the Big Injun to the Gordon sand a test on the W. D. Kinsey farm. In Union district, Tyler County, Long Brothers have a rig up on the Edward Long farm.

In Walker district, Wood County, the Penn Royal Oil Co. has started to drill on the Rebecca Montgomery farm. In Sheridan district, Calhoun County, the Great Elk Oil is building the rig for No. 27 on the Samuel Bachman farm. The location for No. 28 has been made.

Southeast Ohio

In Grandview Township, Washington County, McVey Brothers & Co. have a 15-bbl. pumper in the Maxon sand at a test on the D. C. Burnett farm. Three miles north of Hebron, Union Township, Licking County, Smith, Hazlett and others have a dry hole at a test on the S. T. Ruckland farm.

In Section 13, Adams Township, Monroe County, the Nurphy & Co. test, on the Everett Henthorn farm, is a duster. In Section 11, Meigs Township, Muskingum County, John Swisher & Co. have a dry hole in the Clinton sand at a test on the William Prouty farm.

One mile north of Stewart, in fractional Section 18, Athens County, the First National Bank of Marietta completed in the McCune sand at a total depth of 170 feet, No. 3 on the George

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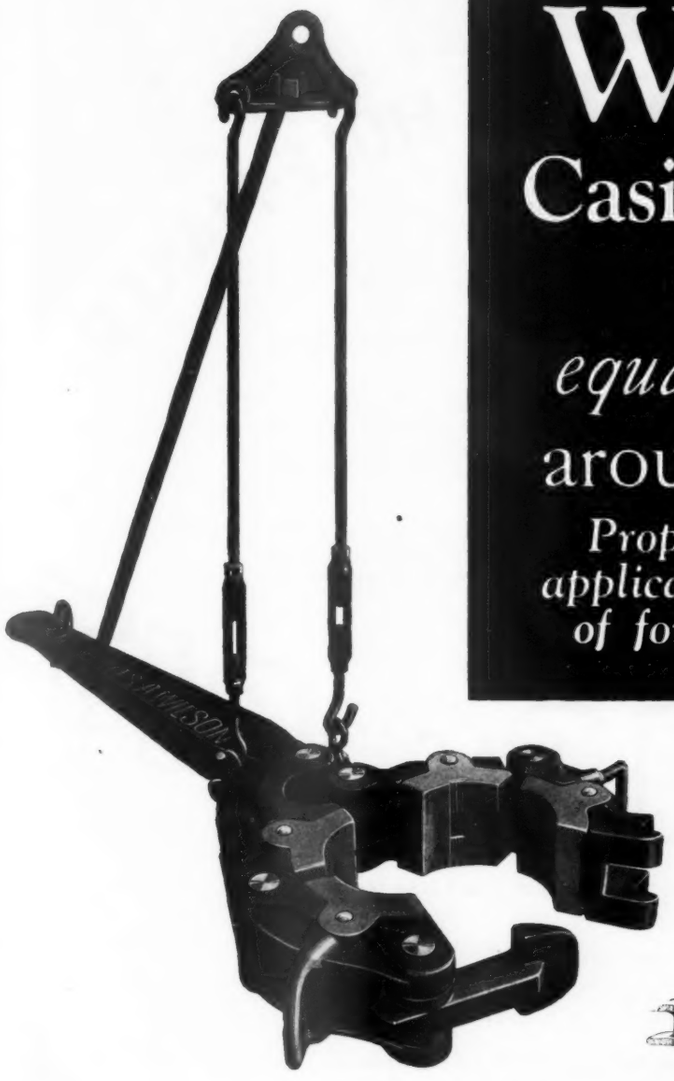

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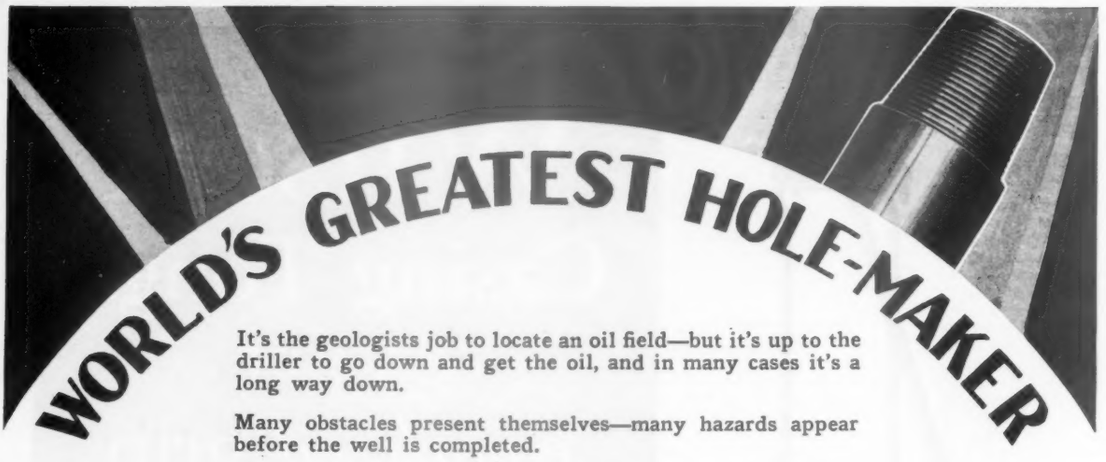

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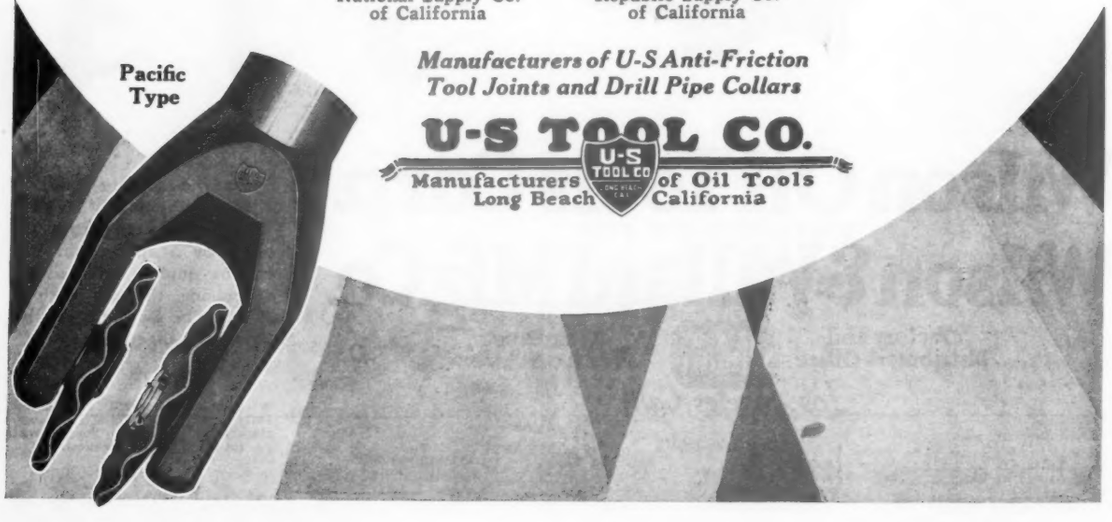

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Y. Tedrow farm and produced 15 bbls. the first 24 hours after shot. In Lot 73, Athens Township, Athens County, Gross and others have completed in the Berea grit a test on the W. H. Clucker farm and not good for more than 1 bbl. a day.

Morgan County

Three miles west of Chesterhill, fractional Section 24, Marion Township, Morgan County, Charles Woodyard & Co. have completed in the First Cow Run sand No. 4 on the Charles Woodyard farm. It is good for 15 bbls. In Mill Creek Township, Coshocton County, the Fender Oil Co. has completed in the Berea grit a test on the Mrs. Helwig farm. It is a duster.

In Lot 17, Newton Township, Licking County, E. J. Edmons & Co.'s test, on the Blire heirs' farm, is a duster. In Section 27, the North Fork Oil Co. has a rig up for a test on the Edward McKinney farm. In Mary Ann Township, H. C. Farmer & Co.'s test, on the E. D. Wright farm, is a 2-bbl. pumper in the Berea grit. In Section 13, Franklin Township, the Detex Oil & Gas Co. and others have a very light pumper at No. 10 on the Otto Franks farm.

In the northeast quarter of Section 2, Harrison Township, Muskingum County, J. J. Keller & Co. have completed No. 4 on the Boyce heirs' farm and good for 3 bbls. In the northeast quarter of Section 23, Center Township, Noble County, J. H. Yearin & Co. have a duster in the Buell Run sand on the A. R. Pitts farm. In Enoch Township, Section 9, Francis Schafer has a dry hole at a second test on the Valentine Hill farm.

Meigs County

In Section 18, Sutton Township, Meigs County, Ohio, the Brewer Farm Oil Co. has completed in the Berea grit a second test on the T. and W. Brewer farm, good for 12 bbls. a day. In Section 1, Jefferson Township, Knox County, the Upham Gas Co.'s test, on the George Swingle farm, is dry in the Clinton sand.

In Liberty Township, Washington County, Charles T. Erb has started to drill a test on the David Epler farm. In the northwest quarter of Section 18, Sutton Township, the Ohio Fuel Supply Co. has started to drill on the Carl J. and William R. Easterday farm.

In Section 7, Benton Township, Monroe County, Martin Yester & Co. are due in the sand on the Catherine Yester farm. In Section 12, Switzerland Township, the American Natural Gas Co.'s test, on the F. J. Knuckle farm, is a good gasser. In Washington district, Section 24, the Gold Crown Oil & Gas Co. has the rig completed for a second test on the Loretta Pryor farm. In the same township, the Sylvania Producing Co. has the rig completed for No. 4 on the M. J. Hodge farm.

In Section 53, Salem Township, Washington County, W. C. Patterson & Co. completed in the Macksburg 200-foot sand, No. 6 on the George Schmidt farm. It is dry. In Section 32, Independence Township, same county, the First National Bank of Marietta has a very light pumper in the Mitchell sand at No. 38 on the Herlan-Mendenhall farm.

In Section 24, Reading Township, Perry County, Henderson Oil Co. has started to drill a test on the R. W. Henderson farm. In Section 11, Rush Creek Township, Fairfield County, the Kittle Oil & Gas Co. has started to drill on the F. M. Kittle farm.

Southwest Pennsylvania

The Carnegie Natural Gas Co.'s second test on the Mary C. Weir farm, in Morris Township, Washington County, is a duster. In South Franklin Township, same county, the same company's second test, on the H. F. Taylor farm, is a 10-bbl. pumper. In the Wildwood district, Allegheny County, J. S. Walley & Co.'s test, on the Carroll farm, which came in 10 days ago and showed for much better than the average for that district, is now good for 10 bbls. a day. In the same locality, Christ Hardt has a rig up for a second test on his own farm.

Dusters in Patton Township

In Patton Township, in the vicinity of where the Morse Oil & Gas Co. completed a sensational well several months ago on the Behr farm which for the first few days produced several hundred barrels and then quit, the Morse Oil & Gas Co. has now completed a test on the Mort Miller farm, dry in the Elizabeth sand. L. O. McKinney and others have completed a test on the Mrs. Smith farm, dry in the same formation. In Plum Township, E. R. Buzard and O. S. Grubbs & Co. are drilling tests on the Charles F. and Florence A. A. Selledeck and O. S. Grubbs farm. Both are now drilling in the 100-foot sand.

Greene County

In Dunkard Township, Greene County, the Greensboro Gas Co. has completed a test on the R. Lynch farm. It is a gasser in the Dunkard sand. In Perry Township, J. Headlee, trustee, has a gasser in the Big Injun sand at No. 3 on the C. H. Lemley heirs' farm. In Richhill Township, Boundy Brothers & Co. have a duster in all sands at a test on the Charles Campbell farm. In Morris Township, the Consumers Fuel Co.'s No. 4, on the James S. Rutan farm, is holding up at 80 bbls. a day. In Washington Township, the Greensboro Gas Co. is drilling a second test on the Fay Headley farm.

In Perry Township, Greene County, the Charles Cox Gas Co. has a gasser in the Big Injun sand at No. 3 on the Charles Lemley farm. In Whitley Township, the Carnegie Natural Gas Co. has a gasser in the 50-foot sand on the William Fox farm.

In Greene Township, Beaver County, the George Freshwater Oil & Gas Co. has drilled No. 3 on the Hugh Laughlin farm, through the Gordon sand, and it is a duster.

KENTUCKY-TENNESSEE

(Continued from Page 60)

Glades County is in the interior of Florida, just west of Okeechobee Lake, and bounded on the south by Lee County, on the west by Charlotte County and on the north by Highlands County and almost west of West Palm Beach.

A test is reported under way near the town of Sebring, in Highlands County, also one under way in the vicinity of Opal, in Okeechobee County. Two other tests were reported being made in Glades County. One by the Seminole Petroleum Corp., in Section 5-38-32, and another by Langford and others in Section 5-28-32.

No recent report has been made on the drilling well by the West Frostproof Land & Oil Co.'s venture in Section 40-32-27, in Polk County, north of Highlands County.

Eastern Kentucky

There is a lull in operations in all parts of eastern Kentucky, owing to the heavy showers during June and the heavy damage done along the many creeks and rivers passing through the hills, and it will require months to replace the loss to all concerned.

In District 21 of Floyd-Knott Counties, the Distill Martin Oil & Gas Co. drilled in a gas well on the Blucher Allen farm.

In Johnson-Magoffin Counties, the Reno Oil Co.'s No. 8 on the J. P. Conley farm, District 25, is reported showing for 10 bbls. In District 27, same area, S. J. Patrick's No. 2 W. L. May farm is estimated at 15 bbls.

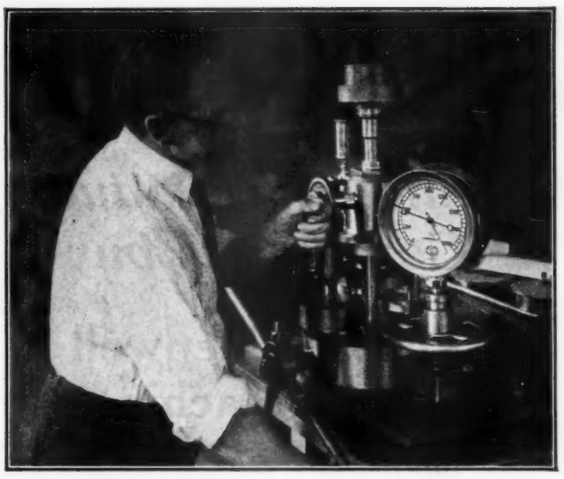
Western Kentucky

Western Kentucky is maintaining its development work better than the eastern portion of the state, due, to a large extent, to the good wells being found in Ohio, Daviess and Barren Counties, the former county having by far the larger producers that keep Kentucky's oil field in the running.

The Ambrose Pool appears to have the first call, for the wells in the area have been among the best found for many months in any section of the state. Take the John R. Weller 110-acre lease, for an example. James C. Ellis, a native with no experience whatever in the oil business, has already brought in 18 wells on the lease without a failure, and none of the wells showed an initial production below 100 bbls., which is quite a record for any spot in Kentucky.

Ohio County

It is almost a certainty that only a



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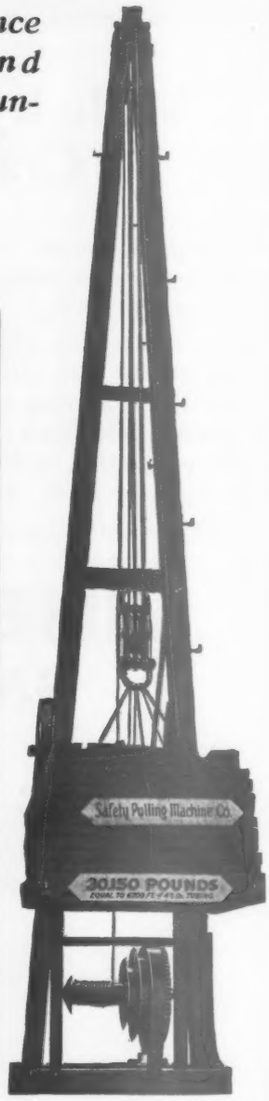

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portion of Ohio County has been tested by the drill and seldom a week passes but what some outside well develops into a commercial producer and within the past few weeks several additions have been made to producing pools in spots looked upon as outside of the oil limits. A new well just reported on the Owens or Bartlett lease, west of the Ambrose Pool and near Union Grove Church, is better than first thought to be. This well was drilled by C. E. Daugherty and others; the company financing it is composed of Dr. M. G. Buckner and George Engle, of Owensboro, and Tom McEldowney of Winchester. This find is of great importance since it shows that the Ambrose Pool is extending westwardly. This well was shot and reported to have showed an initial production of 60 bbls. The nearest production to the new wells is on the Rodney Taylor farm, west of the Weller farm, and the intervening territory may prove productive as the Taylor farm of the Ohio Oil Co., and the Bartlett farm, of Lee and Engle, both west and southwest of big production on the Weller lease, show 100-bbl. wells.

Another attractive area is that on the south side of Rough River, near the hamlet of Sunnydale, where recently Doctor Lang and others of Evansville drilled a commercial well on the Widow Wilson farm, followed by a good well drilled by the Wood Oil Co., on the Bud Smith farm, near by, while late advice is that Doctor Lang and others have brought in a second well on the Widow Wilson farm estimated around 60 bbls. initial and are starting No. 3, while the Wood Oil Co. is close to the sand with No. 2 on the Bud Smith lease. This new development is close to 4 miles southeast of the Ambrose Pool.

In the Union Grove Church area C. E. Daugherty and others are starting a second venture on the Owen or Bartlett farm.

To the north of the Ambrose Pool the Creek Drilling Co.'s test on the Wiley Colyer 66 acres is reported dry at 884 feet. To the west of the Colyer farm the Rex-Pyramid Oil Co.'s No. 2 on the J. Sinnitt 210-acre farm, and an offset to a good well on the E. Ford farm, owned by the Leeper Oil Co., is also reported dry in the Jett sand. No. 1 on the farm, completed during 1926, was dry in the Barlow sand from 1,013 to 1,022 feet.

The Ohio Oil Co.'s No. 6 well, 200 feet from the south line and 575 feet from the east line of the Rodney Taylor 58 acres, just west of the Weller farm, and in the Ambrose Pool, set a string of 680 feet of casing, found sand at from 684 to 725 feet and drilled to a depth of 727 feet and, shot with 140 quarts, looks like a 150-bbl. producer, and will make a 75-bbl. well when put on the pump.

In the same pool, James C. Ellis brought in his No. 17 well, 150 feet from the south line and 360 feet from the west line of the J. R. Weller 110 acres. A string of 619 feet of casing was used and the sand found at from 619 to 660 feet, and shot with 140 quarts. The initial production was 200 bbls. No. 18 well, 75 feet from the south line and 10 feet from the west line on the same farm, set 654 feet of casing, got sand from 654 to 697 feet and shot with 140 quarts, the well producing an initial of 150 bbls. Nos. 19, 20, 21 and 22, same farm, are drilling. Lee & Engle are drilling on the E. G. Owen farm, to the eastern edge of the Ambrose Pool, east of the J. C. Ellis farm, and south of the L. Crowe farm. Creek Drilling Co. is drilling Nos. 4 and 5 on the Sally Early farm, south of the Weller farm. The Ohio Oil Co. is drilling Nos. 7, 8 and 9 on the Rodney Taylor farm.

Daviess County

In the Pellville Pool, in Daviess County, and a few miles southwest from the town of Pellville, Tremor and Thompson's second well on the John H. Miles 57 acres, is directly west of the John Roby farm and south of the F. C. Coomes 78 acres in Daviess County. The Roby lease is owned by the Leeper Oil Co. and the Coomes lease by the Petroleum Exploration Co. In the No. 2 Miles farm, top of the Jett sand was found at 454 feet, first oil showing at 3 feet in sand and bottom of sand at 496 feet, the sand being 42 feet thick of which 38 feet was shot. It is estimated by those present at the well to show for 75 bbls. initial but may not prove as large, still a very good well. Its location is 400 feet west of No. 1 on the same farm. This makes seven new oil wells so far for the Roby area, all being above the average of the Pellville Field wells.

The Leeper Oil Co. has moved its drilling machine from the Roby farm, to the Barnett 50 acres, it being an offset to No. 1 Roby farm.

Barren County

In the Lecta Pool, southeast of Glasgow, Sanson Oil Co. and others' No. 3 on the Walter Browning farm produced 25 bbls. from the Blue sand at 455 feet deep, and Hunt, Leach and Mitchell's No. 14 on the Vance Taylor farm produced 10 bbls. from the Blue sand at 458 feet.

In the Becton area the Sanson Oil Co.'s No. 1 on the W. T. Haines farm produced 2 bbls. In this well the gas sand was found from 200 to 420 feet and the Blue sand from 460 to 472 feet.

Warren County

South of Bowling Green, in Warren County, the Thompson Oil Co.'s No. 4 on the Joe McLemore farm produced 18 bbls. from a depth of 1,093 feet.

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(Continued from Page 66)

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Southern Manganese Steel Co., St. Louis, Mo.

and H. R. Pierce. Presented at the twentieth annual meeting of the Natural Gas Association of America.

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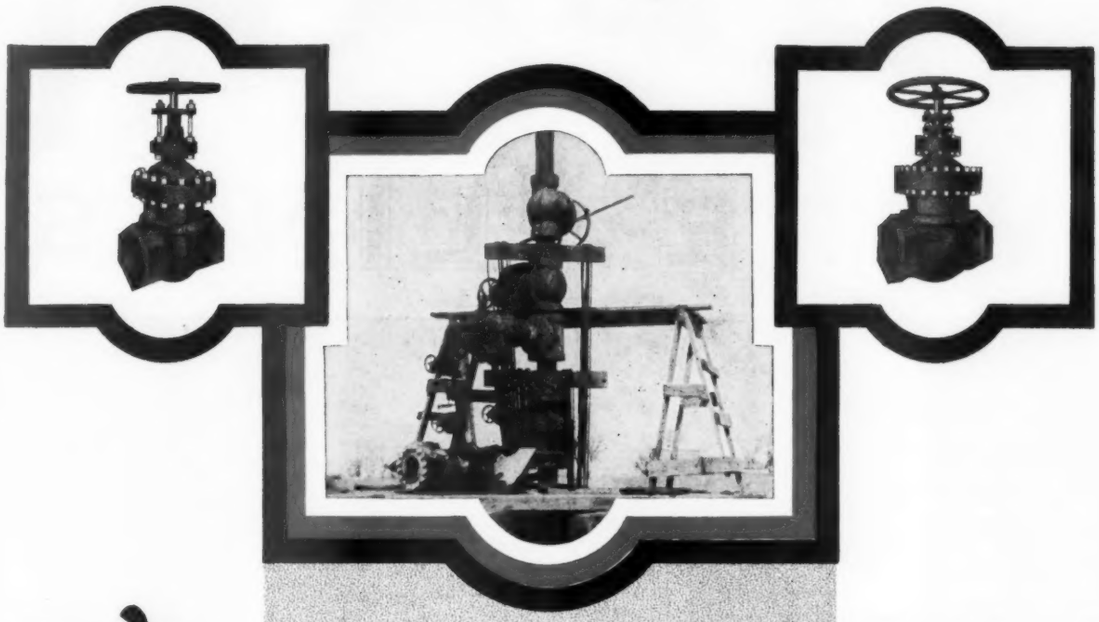

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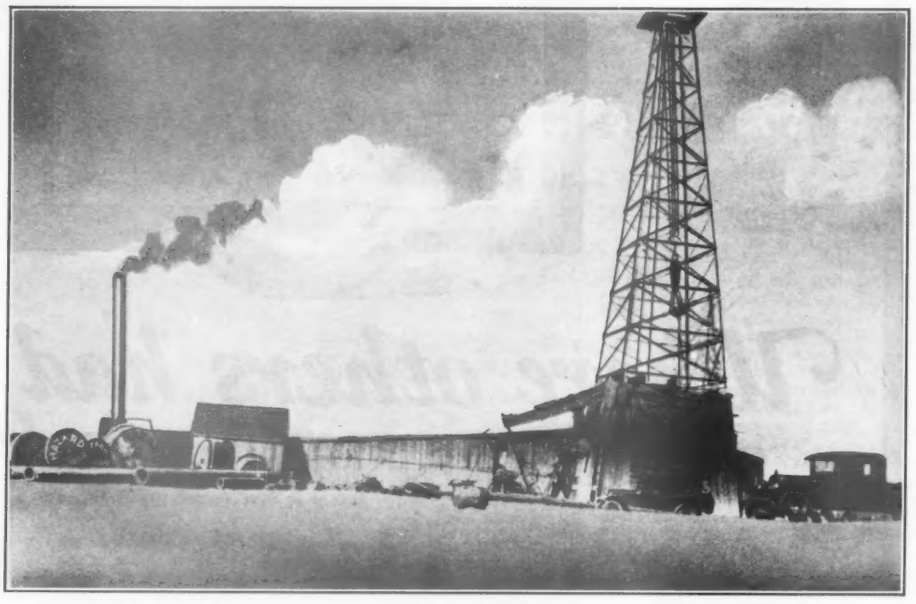

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Berry, I. V. Brumbaugh, J. H. Eiseman, G. F. Moulton, and G. B. Shawn. (United States Bureau of Standards Technologic Paper No. 222.)

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Factors Influencing Length of a Gas Flame Burning in Secondary Air; by E. W. Rembert and R. T. Haslam. (Department of Chemical Engineering, Massachusetts Institute of Technology, Publication No. 143.)

Factors Effecting Utility of Secondary Air in Gaseous Combustion; by E. W. Rembert and R. T. Haslam. (Department of Chemical Engineer, Massachusetts Institute of Technology, Publication No. 144.)

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Engineering Thermodynamics; by C. E. Lucke, McGraw-Hill Book Co., New York City.

PENNSYLVANIA FIELD DEEP TESTS SHUT DOWN

OIL CITY, Pa., July 2.—All three of the deep wells being sunk in Pennsylvania are now shut down for various causes.

The United Natural Gas Co. well at Lamont near Kane struck another gas pocket in the Salina formation and this blew about an hour. The well was at 6,075 feet. Drilling had just been resumed after the well had been cleaned out following the striking of a gas pocket at 6,010 feet on April 21. In this blowout the cracker was ruined and the tools and part of the cracker are now lodged 200 feet off the bottom of the hole. The well has been cleaned out to the tools and the company men are ready to take them out which is not expected to develop into much of a job. A new 8,000-foot cable is being used on the job. The gas is being struck in pockets in limestone streaks.

The Deemer deep hole, in Jefferson County, is shut down at 7,175 feet while the tools are being used on another well.

The Fidelity Petroleum Co.'s deep test at Tidioute is shut down at 5,499½ feet having struck black water. They are waiting on a 5-inch liner to shut off the water.

BUYS WEST INDIA OIL CO.

A report from Havana, Cuba, states that the Standard Oil Co. of Cuba has acquired recently the entire holdings of the West India Oil Refining Co., including a local refinery of 6,000 bbls. capacity, but which is only at present running 2,000 bbls. daily.

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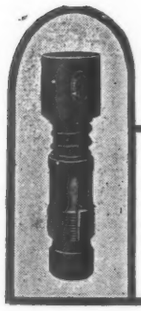

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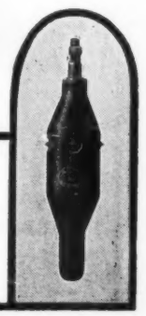

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CALIFORNIA FIELDS

(Continued from Page 56)

Christmas tree held tight, however, and the well was not damaged to any great extent, although an entire new set of fittings will be required. George F. Getty's No. 6 Alamitos and the South Basin Oil Co.'s No. 1 Copeland were also damaged by this destructive fire, but both will be on steady production again shortly. Operators started cleaning up the debris almost immediately after the fire had been extinguished and, while an entire square block had been laid waste, new derricks are already in course of construction.

Huntington Beach

Drilling operations at Huntington Beach have slowed up considerably during the past several months and instead of the intensive work which has heretofore characterized operations in the town lot area development is now going along at a more desirable rate. New wells from now on will, of course, be more or less infrequent and, while the day of big production is over so far as this field is concerned, operators are getting 400-bbl. wells quite regularly. The Standard's No. 8 Pacific Electric, finished this week, started off flowing 460 bbls. daily from 4,305 feet. The Standard has two other drillers nearing completion on this property but will spud in four more soon. The Olympic Refining Co.'s No. 11 Huntington was a somewhat smaller well than the Standard's No. 8 Pacific Electric, although it was nevertheless a commercial producer. It registered an initial of 210 bbls. daily from 4,330 feet. Drilling operations at Long Beach are also at a low ebb, most of the work consisting of redrilling and deepening jobs. The next deep sand well scheduled for completion in this district is the Delaney Petroleum Corp.'s No. 7, which is showing exceptional promise at 5,475 fet. The A. T. Jergins Trust, also has a potential producer in No. 7 which will be given an early test at 5,454 feet. Jergins, by the way, completed a new well from the 4,800-foot level. This was No. 20 Municipal, which started off pumping 195 bbls. daily. The Shell is making good footage in Nos. 8, 9, 10 and 11, four new wells on the Cresson lease, but since they have the deep sand as their objective completion is not anticipated until along about the latter part of July. Drilling operations at Rosecrans, Inglewood, Dominguez, Torrance and Santa Fe Springs did not show any appreciable change during the week, new work being minimized as far as possible.

Richfield

The Associated completed No. 5 Bayha in the Richfield District several days ago and this well is one of the largest producers finished in that area for some time. It is being listed as a 715-bbl. flowing well from 4,386 feet, the oil testing 24.2 degrees and showing a cut of 1 per cent. A careful check of drilling operations now under way in the Richfield District indicate the probable completion of some 8 or 10 potential producers during the next 30 days. The General Petroleum is running seven strings of tools in this field, while the Union has 10 new wells and former producers scheduled for early completion. The California Petroleum finished two new wells in this field but both were relatively small pumpers. No. 6 Bradford is doing 100 bbls. daily from 4,752 feet, while No. 8 Krug is making 140 bbls. from 4,564 feet. The Shell's No. 2-A Puente at Brea Olinda was a distinct disappointment as it is only capable of pumping about 50 bbls. daily from 5,152 feet. No. 6 Fisher, however, is showing up quite well at 5,149 feet and should offset this small production. The Fullerton Oil Co. landed a string of 6¼-inch in its No. 22 at 4,050 feet and with approximately 1,000 feet of sand this well should do better than 500 bbls. a day upon completion. The Holly Development Co. logged several good showings of oil and gas around 2,500 feet in its No. 1 Barnett in the East Coyote Field and this well may possibly extend the proven limits 1,500 feet eastward. It is too early, of course, to predict the development of commercial production but considering the location of the hole and the showings found it has more than an even chance. Drilling is in capable hands under the personal direction of William (Bill) Kammerer. The Holly interests have something like 400 acres under lease in this immediate area and the importance of a find by the company can easily be appreciated. Herndon & Hunter, who are responsible for the extension work now under way in this section, recently spudded in No. 2 Lemke, which is in close proximity to No. 1, the extension well.

Ventura Avenue

The General Petroleum successfully finished No. 1-A Hisey in the northern part of the Ventura Avenue Field early in the week and, while the initial production was not as large as anticipated, it was satisfactory. The well came in flowing 550 bbls. of clean 30.2 gravity oil daily from 6,429 feet, the hole being finished with a 5¾-inch oil string. The Hisey property upon which this new producer is located is owned by the Ventura Citrus Association. The first well started on this property was abandoned at 690 feet but by a strange freak it subsequently started flowing a few barrels of 62 gravity oil per day. This high gravity oil could be put directly into an automobile tank and used for fuel. In the southern part of the field the Petroleum Securities will make an early test of No. 1 Willett, which has been carried down to 6,161 feet and a string of 6⅝-inch landed and cemented at 6,028 feet. The Associated and Shell, although they have restricted drilling operations in this field, are working on several potential producers which should be listed for completion within a month unless orders are later issued to hold up completion. The Ventura Avenue Field, as a result of the crude oil curtailment measures initiated by all companies operating in that district, has shown a decrease in gas production during the past two months. This decline is in sympathy with and reflects the pinching in of producers started on May 1. This field is perhaps the largest high pressure district ever opened in California and, while gas pressures are not as high as heretofore many wells still require extreme care previous to completion. As drilling has progressed operators continue to drill deeper with the result that 6,500 foot completions have become quite frequent. Approximately 1,000 acres of productive territory have actually been proven, the total productive area being estimated at around 2,000 acres. Notwithstanding decreased gas pressure, operators are still resorting to the use of hematite, which is called liver by drillers because of its blood red color.

Kern River

George F. Getty successfully finished another new well on the Kern front and incidentally increased his daily production 130 bbls. Getty's new producer is No. 18 Tegeler, drilled to 2,480 feet and finished with a 6¼-inch oil string. Additional wells will be completed in this field soon by the Chanslor-Canfield Midway Oil Co., General Petroleum, Standard and George F. Getty. Operations in the Mount Poso District, approximately 15 miles northwest of Kern River, have been reduced to a minimum and, since no pipe line facilities are available for the movement of this crude, only enough oil is being produced to meet fuel oil or road building requirements. The Union has suspended all operations, which it can do to advantage in as much as the acreage being developed is owned in fee. The Shell has temporarily suspended drilling on No. 1 Glide, due to the unfavorable outlook at 3,537 feet, but will continue normal development work on the Vedder lease. Over in the Round Mountain Field, approximately 15 miles northeast of Kern River, the Elbe Oil Co. has shut in its discovery well as lease storage has been exhausted. The company's discovery well produced approximately 5,000 bbls. before being shut in on account of no immediate market. The Elbe is proceeding with additional development and has No. 2 Freeman down

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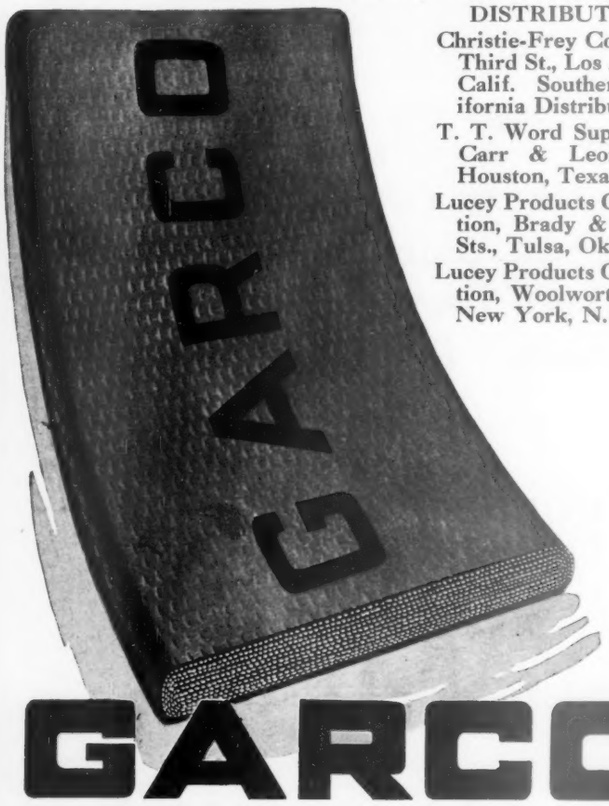

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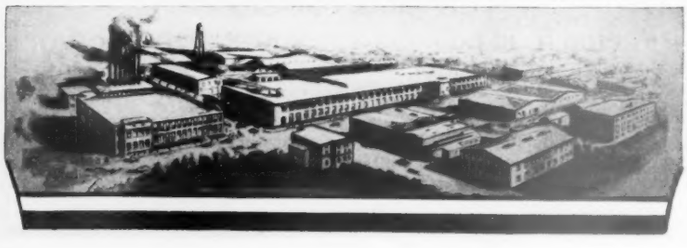

995 feet. This well is approximately one-half a mile south of the discovery.

Goleta

The Santa Barbara Oil Co.'s No. 2 Hollister, which was finished in the Goleta Field last week flowing 560 bbls. per day, was opened up for a few hours early this week and produced at the rate of 1,050 bbls. per day. It is subsequently beaned down and is now flowing a little better than 500 bbls. The Santa Barbara Oil Co., which is synonymous with the Transcontinental Oil Co., should complete another new producer, No. 1 Hollister, within 10 days and as a result of the big production secured in No. 2, work is being pushed ahead on No. 3. The California Eastern Oil Co.'s No. 1 Doty is running true to form and on the showings found to date E. J. Miley is making preparations to offset this well immediately. Miley's deep test, by the way, which is now down 4,250 feet, has shown a little change for the better and may possibly bear watching during the next 30 days. Miley's next completion at Goleta should be No. 7, now in the oil sand at 1,445 feet and showing exceptional promise.

Northern California Wildcats

The most interesting wildcat in California at present is the Chanslor-Canfield Midway Oil Co.'s 1-B Hobson, west of the prolific Ventura Avenue Field in Ventura County. This wildcat looks so promising that a new field at this point seems almost assured. Ward Blodgett of the Chanslor-Canfield Midway Oil Co. is quite optimistic over the outlook and, while he is still maintaining a conservative attitude he nevertheless anticipates the completion of a commercial producer. If a new field is opened up at this point it will probably be designated as the Padre Canyon Field. Practically all of the potential productive acreage in this new district is held by the Chanslor-Canfield Midway Oil Co., although several other operators have large blocks of acreage tied up, part of which may prove productive. The Shell's No. 1 Murphy, now down 5,470 feet, is perhaps the deepest wildcat drilled in Sonoma County and, while drilling is still going ahead, the possibility of developing commercial production appears to be rather slim. More than a normal amount of wildcatting has got under way at Kettleman Hills in Kings County, and while none of the various tests now drilling has succeeded in developing commercial production two of them, the Bolsa Chica's well No. 1 and the General Petroleum's No. 1 Burbank, have shown possibilities, although water is still preventing clean production. The outlook is promising and a new field may be opened up. The Chanslor-Canfield Midway Oil Co. contemplates the resumption of drilling in No. 1 Quinn, a wildcat at Delano, but in view of the rather promising outlook at 1,723 feet the hole will be cored almost solid for the next 25 or 30 feet.

Southern California Wildcats

The Shell recently closed a lease for the J. B. Connolly property at Potrero and while many operators were surprised by this move it has been expected in some quarters as the Shell has been studying this situation. This acreage was at one time held by the Marland but subsequently relinquished following the drilling of a dry hole. It is unknown whether the Shell contemplates an early test or whether the property acquired is merely protective acreage. Neither the Associated nor California Eastern has succeeded in finding the sand found in the former's original wildcat, No. 1 Cypress, which has been standing cemented in a reported oil sand since November and the outlook is not any too bright. George F. Getty is making good progress in his No. 1 Tubbs at Rivera which will be watched very closely. The Shell is running a core in No. 1 Mission, a wildcat in the San Fernando Valley and, while the sample taken at 2,360 feet has not yet been opened, it is doubtful if it will show anything of importance. The Smith Petroleum has gone back into its deep wildcat near Hawthorne and will make a thorough pumping test of this 6,215-foot hole which has shown some promising indications.

OKLAHOMA FIELDS

(Continued from Page 44)

the Wilcox sand, drilled on to the Siliceous lime at 3,900-85 feet and was abandoned. Blackwell Oil & Gas Co.'s No. 11 Nix, C E half SE Section 18-28-1e, has been drilled deeper and completed for 195 bbls. in sand at 3,420-23 feet. John Stark and others' No. 1 Huddleston, SE cor. NE SE Section 28-28-2, is dry and abandoned in the Wilcox sand at 3,963-67 feet. Harris & Haun's No. 1 Brown, SW cor. Section 9-27-1w, has been deepened 10 feet in the sand at 3,468 feet and is making 7,000,000 feet of gas. Marland Oil Co.'s No. 4 North (lease No. 2), SW cor. NW SW Section 6-26-1w, Hubbard Pool, produced 269 bbls. the first 24-hour gauge from the Wilcox sand at 3,660-85 feet, and has since declined to 78 bbls. A. D. Morton and others' No. 1 Keathley, NW cor. SE Section 21-26-1e, had the top of the Wilcox sand at 4,635 feet with a hole full of water and drilled to 4,645 feet and abandoned. Carter Oil Co.'s No. 1 Sutton, NW cor. SE Section 30-25-1w, Tonkawa Field, is bailing 49 bbls. after it was drilled to 4,416 feet in the Mississippi chert and plugged back to 4,404 feet.

Pawnee County

Watchorn Oil & Gas Co.'s No. 4 Miller, SW cor. Section 33-23-3, an old well being drilled deeper, is now drilling at 4,205 feet in lime.

Pontotoc County

Shafer Oil & Refining Co. has the rig up for No. 1 Yoakum, SW cor. NW NW Section 16-5-8. Homaokla Oil Co. has built the rig for No. 1 Crumley, SE cor. NE SE Section 17-5-8. W. R. Ramsey's No. 1 Milner, NE cor. SW Section 17-5-8, is rigging up rotary tools. The rig is up for No. 1 Webb, NE cor. SW Section 20-5-8.

American Oil & Refining Co.'s No. 1 Wray, CSL SE Section 27-5-6, has been completed for 10,000,000 feet of gas in sand at 1,916-18 feet.

Stephens County

Beard & Cobb built the rig for No. 2 Moore, SE cor. NE NW Section 11-2s-8w. Hall & Briscoe built the rig for No. 1 School land, SW cor. SE SE SE Section 24-1s-4w. Humble Oil & Refining Co. has the rig up for No. 3 Peddycort, NE cor. Section 25-1s-4w.

Harry Hanbury's No. 4 Taliaferro, C SW SW Section 27-1s-8w, has been abandoned at 2,025 feet. Beard & Cobb's No. 1 Leach, NE cor. SE NW Section 11-2s-8w, is dry at 2,252 feet. Hammond & Haddock's No. 1 Ball, CWL SW NW Section 1-1-9w, is a dry hole at 2,496 feet. Merrick-Cameron Oil Co.'s No. 2 Underwood, NW cor. NE SE Section 13-1s-4w, made 25 bbls. from a series of sands at 2,355 feet to 2,955 feet, total depth 3,000 feet.

Haskell County

San Bois Gas Co.'s No. 1 Watkins, CEL SE Section 23-8-20, is rigging up tools. No. 1 Johnson, NW cor. Section 26-8-20, was completed for 750,000 feet of gas in sand at 800-36 feet, after drilling to 1,000 feet.

Logan County

Roxana Petroleum Corp. is digging the cellar for No. 1 Sebranek, SE cor. NE Section 30-19-4w.

Muskogee County

W. J. Metzger has moved a machine out for No. 5 Crittenden, SE cor. NW SE Secton 6-14-19. Sommerville & Brown's No. 3 Lewis, NW cor. NE Section 17-15-17, drilled to 1,500 feet and is making 14,000,000 feet of gas.

Oklahoma County

Cromwell & Franklin's No. 1 Stone, C SW Section 28-12-4w, is dry and abandoned at 4,713 feet.

Okfuskee County

L. Umburn's No. 2 Scott, CSL SE SE Section 3-10-11, is rigging up. No. 1 Hill, NW cor. SE NW, Section 11-10-11, was drilled to 2,700 feet and abandoned.

Okmulgee County

G. D. Roberts has a machine at the location for No. 2 Belisle, C SE SE Section 16-15-11. M. W. Wilder and others have the rig on the ground for No. 1 Adams, SW cor. NW NE Section 17-14-12. B. Morgan's No. 9 Kanard, NW

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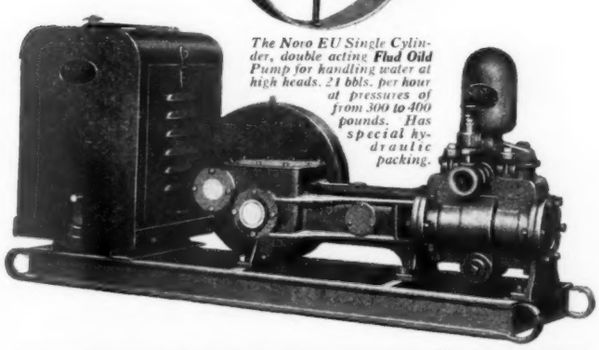
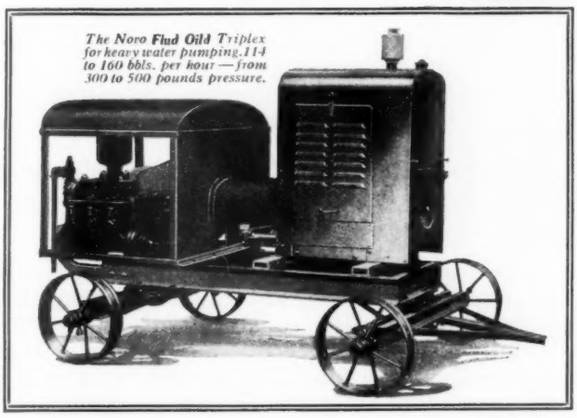
Enclosed in an oil-tight, dirt-proof case, every gear, bearing, pin, and crosshead is automatically flooded with oil. There is no guesswork, no grease cups to adjust, virtually nothing to get out of order.



The Novo EU Single Cylinder, double acting **Flud Oild** *Pump for handling water at high heads. 21 bbls. per hour at pressures of from 300 to 400 pounds. Has special hydraulic packing.*



The Novo **Flud Oild** *Triplex for heavy water pumping. 114 to 160 bbls. per hour—from 300 to 500 pounds pressure.*

For Either Oil or Water

Besides showing real ability on water pumping, the Novo EW Duplex is exceptionally well adapted for use as an oil gathering pump. When ordered for this purpose it is equipped with spring loaded valves and hard rubber face valves. These assure lightning fast action and guard against any possibility of lost pressure. And a clutch comes as standard equipment on outfit powered with 4-cylinder engine.

With the EU Single Cylinder and the NT Triplex to take care of every water pumping requirement, and the EW Duplex to handle either oil or water—the new Novo Flud Oild Series represents one of the greatest lines of pressure pumps ever offered in the oil fields.

The coupon below will bring you detailed information on Flud Oild Pressure Pumps. Send it today—there's no obligation.

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I am interested in a pump that will handle about .....bbls. per hour.

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He was watching a Buck 6-inch Casinghead Regulator make a perfect chart while passing but 1,500 cubic feet per hour, and maintaining 20 inches mercury vacuum at intake.

Such accurate regulation on but 1½ per cent of actual capacity is characteristic of all Buck Regulators. This accurate regulation—from wide open at full capacity down to the valve all but closed—is characteristic solely of the Buck Sleeve Valve principle.

That is because the Buck Sleeve Valve is scientifically correct in design—fully balanced, statically and dynamically, in any position—and immediately sensitive to the slightest pressure change. There is no chattering—dashpots are not needed.

The capacity of Buck Regulators is surprisingly large. There is the least possible resistance to flow of gas. Capacity of pipe lines is utilized to the utmost.

The large capacity of Buck Regulators—their constant regulation of any proportion of volume passing—their highest sensitivity with simplest construction—are producing remarkable results and pleasing economies for many companies that are standardizing on Buck Equipment—just as is the company whose superintendent made the above statement.

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Vacuum Control Division

Kansas City, Mo. Tulsa, Oklahoma

cor. SW NE Section 13-11-13, is spudding.

Osage County

Osage Gas Producing Co. has the machine at the location for o. 374, SE cor. NE SE NE Section 6-27-11. Phillips Petroleum Co. is building the rig for No. 1, SW cor. NW SE Section 17-27-6, Burbank Pool. Oklahoma Natural Gas Corp. made location for No. 771, SE cor. NE SE Section 33-22-11. The Texas Company's No. 3, SW cor. SE SE Section 30-25-8, is producing 60 bbls. from the Burgess sand topped at 2,430 feet and plugged back to 2,470 feet after drilling to 2,476 feet.

SOUTHWEST WILDCATS

(Continued from Page 51)

there is a possibility of getting oil. Chlorite was encountered in the Sun well and the opportunities are for oil or gas in the Anacacho or else the Chlorite or deeper in the Georgetown or Edwards.

Medina County Tests

Two tests in Medina County, due northeast of this, are in a lime that is said by some to be Pennsylvanian. Major companies have not taken acreage around them and the cores and cuttings have not been identified by their experts. The wells are in Medina County and north of the Southern Pacific Railroad. California-Medina Oil's No. 1 Rothe has casing parted with total depth about 3,160 feet, and Switzer's No. 1 Zerr is drilling at about 3,150 feet. There is a growing disposition on the part of the industry to drill deeper than it has been doing heretofore in the Balcones Fault region and all through southwest Texas and a further deep test in Medina County is understood to be in process of negotiation as a community test by three companies. If it is finally agreed to it will keep making hole till it either gets production or runs out of formation or hole.

Duval County

Schlessinger Oil Corp.'s No. 2 Hahl, Survey 60, is location 330 feet to north line and 1,650 feet to east line. National Oil Co.'s No. 1 Ball, Ball ranch, Survey 16, located 450 feet to north line and 150 feet to east line, had derrick blown down and is rebuilding derrick and moving in machinery. Humble-Reiter-Foster's No. 6 Kohler, Survey 400, located 60 feet to west line and 660 feet to south line, is drilling at 2,291 feet. Humble Oil & Refining Co.'s No. 2 Welder-Woods, Survey 102, located 5,280 feet to south line and 4,500 feet to east line, is in sandy shale at 1,977 feet. Dixie Oil-Southern Crude's No. 1 Gray, Survey 316, located 330 feet to NE cor., is standing 3,006 feet.

Hidalgo County

Queen City Oil & Gas Co.'s No. 1 Adams, Lot 1, Block 82, Capisallo district, at 1,709 feet is showing strong gas pressure.

Jim Hogg County

Holden and others' No. 3 Jones, Share 27, Block 136, located 330 feet to east line and 440 feet to north line, is preparing to resume drilling at 1,471 feet, at which depth well has been standing for some weeks. Harry Hamilton and others' No. 1 Holbien, Block 44, at 158 feet to south line and 363 feet to west line, is drilling at 2,220 feet.

Commonwealth Oil Co.'s No. 1 Garcia, Survey 538, located 2,722 feet to south line and 2,102 feet to west line, is drilling at 1,460 feet. Southern Exploration's No. 2 Russell, Share 173-B, Porcion 69, at 150 feet to north line and 950 feet to west line, is rigged up and waiting orders. Milham Corp.'s No. 2 Salinas, Porcion 111, SE cor., is drilling at 4,300 feet.

Webb County

Rio Grande Oil Co.'s No. 1 Urbahn, Santo Tomas tract, 10,000 feet to south line and 20,000 feet to east line, is drilling at 1,621 feet. O. W. Killam's No. 2 Billings, SE NW Survey 712, at 450 feet to NW cor., is moving in. Tubbs & Wright's No. 1 Reiser, Survey 1,617, Block 14, is drilling. W. O. Wheatley's No. 3 Kruger, Survey 1,570, Block 4, is location 640 feet to north line and 421 feet to east line.

Zapata County

H. H. Galbraith's No. 1 Hirsch, Survey 595, is location in NE cor. Buffalo-Erie's No. 1 Burtrand, Survey 627, is location 3,239 feet to northeast lines and 500 feet to northwest lines. E. K. Bateman's No. 2 Vela, Block 4, at 675 feet to northwest lines and 417 feet to northeast lines, is drilling at 1,397 feet with sand at 953-70 feet. Roxana Petroleum Corp.'s No. 1 E. Lopez, Survey 288, located 150 feet to northwest and northeast lines, is drilling at 1,008 feet, having tested dry at 974-1,007 feet. J. H. Winch's No. 2 Bustamante, Share 11, Block 2, Fansler Partition Comitas grant, 2,400 feet west of No. 1, is drilling at 240 feet.

Bexar County

Allen Burnam's No. 1 Ward, south of Martinez on the R. A. Ward lease, 600 feet to north line and 2,400 feet to west line, is ready to spud. A. R. Beal, trustee, No. A-1 Ackerman, Survey 133½, is drilling at 664 feet in gumbo.

Bee Sounty

Red Ant Oil & Gas Co.'s No. 1 Perry & Chesnut, 7 miles west of Pettus, has been spudded in. D. Hewitt's No. 1 G. A. Ray, located 1½ miles west of Pettus, is drilling at 1,100 feet. Nichols & White's No. 1 Hicks, Hicks-Ball Survey, Block 19, NW cor., is standing at 1,408 feet.

Blanco County

Miller Creek Leasing Corp.'s No. 1 Glasscock, W. M. McDonald Survey No. 50, located 150 feet CEL, is location, with the elevation 1,440 feet.

Caldwell County

The Texas Company's No. 1 Beatty, Nicholas Kelly Survey, 500 feet to southeast lines and 150 feet to southwest lines of farm, is rigged and delayed spudding in by wet weather. Sutton & Smith's No. 2 Carter, Green Hindes Survey, is location 300 feet east of No. 1; No. 1, J. L. New, James Hindes Survey, 150 feet to west line and 600 feet to south line, is ready to spud in; No. 1 Carter, Green Hindes Survey, 150 feet CNL, is swabbing every other day at 2,597 feet and getting water and little oil. Kuhn & Armstrong's No. 1 Thomas is swabbing a little oil—about 5 bbls. Calco Petroleum Co.'s No. 2 Thomas, located 600 feet southeast of Kuhn & Armstrong's No. 1, is drilling at 400 feet. Detex Oil Co.'s No. 1 Hardeman, 4 miles north of Luling, reported to have taken core at 2,897 feet, thought to be in the base of the Edwards, showing oil. Ritchie-Bruner's No. 1 Davis, at 2,557 feet, is pumping about 12 bbls. daily of 35 gravity oil.

DeWitt County

Collette Oil Co.'s No. 1 Boldt, James Lasater Survey, 3,129 feet to east line and 800 feet to south line, is rigged up ready to spud in. G. O. Williams and O. L. Gates' No. 1 Gohmert, Brooks League, 175 feet to north line and 300 feet to east line, is standing at 100 feet waiting on titles. Empire Southern Oil Co.'s No. 2 Smith, Survey 3, located three-fourths mile west of No. 1, is drilling on hard rock at 1,650 feet. McNeil & Matthews' No. 1 Kaiser, A. Dillard Survey, 1,508 feet to NW cor., is shut down at 2,600 feet.

Dimmitt County

Humble Oil & Refining Co.'s No. 1 City National Bank, Survey 654, located 700 feet to north line and 2,000 feet to east line, is in sandy shale at 2,892 feet.

Frio County

P. A. Neilan's No. 1 Blackaller, James Gouley Survey, is skidding derrick over from No. 1 abandoned at 3,005 feet with a fishing job.

Fayette County

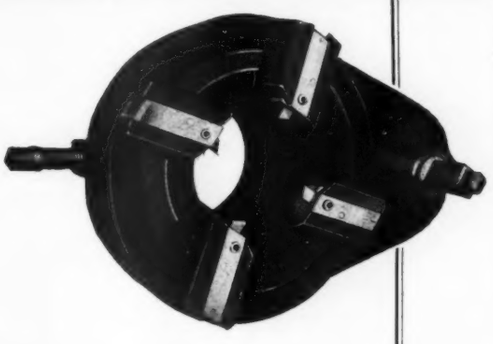
Magnolia Petroleum Co.'s No. 1 Fordtran, J. R. Jones Survey, 200 feet to northeast lines and 1,050 feet to west lines, was to spud in June 28. LaFayette Oil Co.'s No. 1 Marquardt, J. R. Phillips Survey, 976 feet to northwest lines and 400 feet to southwest lines, is drilling.

Goliad County

Houston Oil Co.'s No. 1 J. F. Lott, G. Cortinas Survey, is location 2,000 feet to north line and 300 feet to west line.

Gonzales County

The Texas Company's No. 1 Plowman, Byrd Lockhart Survey, 631 feet to southeast lines and 3,562 feet to northeast lines of survey, is drilling at 175 feet with surface casing set at 175 feet. Gon-



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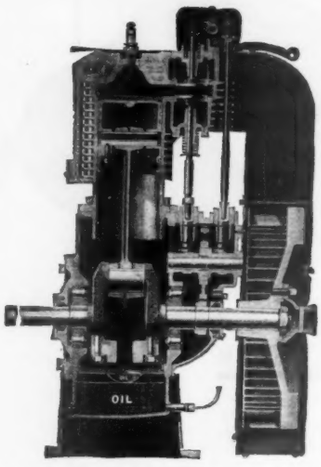

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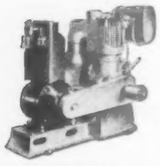

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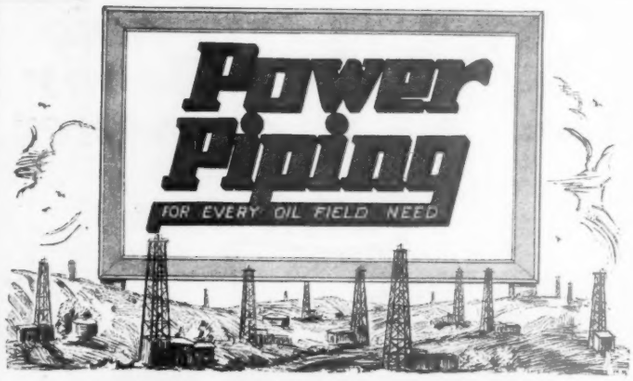

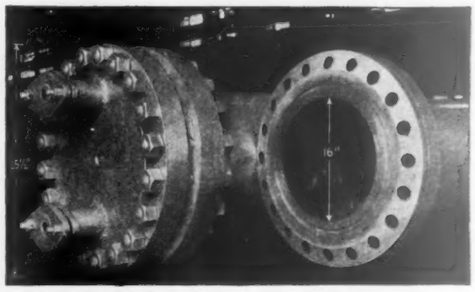

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zo Petroleum Co.'s No. 2 Elder, Block 11, southwest of No. 1, is shut down at 1,638 feet; No. 1 Sinclair, 4 miles northeast of No. 2 Elder, is drilling at 1,200 feet. Bristol Oil & Gas Co.'s No. 2 Denman, A. Zumwalt Survey, is shut down at 807 feet. Martin Oil & Development Co.'s No. 1 Preston, near Cheapside, is at 1,570 feet waiting on casing to make test. Joe Bruner's No. 1 Vaughn, Kent Survey, 200 feet to west line and 300 feet to south line, is standing at 1,406 feet.

Guadalupe County

H. H. Temple's No. 1 McAllister, Edward Kellett Survey, 450 feet to northeast lines and 1,420 feet to northwest lines, is drilling in chalk at 1,907 feet, topped at 1,757 feet. F. A. Lain's No. 1 Weinert, W. K. Estell Survey, 150 feet CNL, is standing at 3,002 feet, contract depth, but may be drilled deeper.

Hays County

J. E. Rodgers' No. 1 Hohenburg, 2½ miles east of San Marcos, is drilling at 1,350 feet after testing slight showing of oil at 1,120 feet.

Kerr County

Walker-Van Duyn's No. 1 Leigh, Survey 38, located 500 feet north of river and 150 feet south of railroad, is drilling at 2,405 feet in white sandy lime.

Kinney County

W. A. Stephens and others' No. 1 Jim Clamp, Survey 346, located 5,362 feet to west line and 5,674 feet to south line of survey, is drilling at 1,000 feet. Havelin Oil Co.'s No. 1 Weatherby, Section 21, Block 5, is shut down at 4,330 feet for engine repairs.

Lee County

Bowers and others' No. 1 Brenbaum, 2 miles east of Monhein, is shut down for orders at 1,820 feet. M. O. Ricketts and others' No. 1 Sanders, Joseph Maximillian League, 250 feet to SE cor., is shut down at 800 feet.

Live Oak County

Houston Oil Co.'s No. 18 Cartwright, J. M. Colchado Survey, located 2,404 feet northeast of No. 5, is drilling. Delta Oil Co.'s No. 1 McNeil, Jane Curry Survey, 4,000 feet to NE cor., is shut down at 530 feet. R. P. Lightfoot's No. 1 Thomas, northwest of Coquat wells, is shut down at 960 feet waiting for roads to dry so drill pipe may be hauled in. Simmons Oil Co.'s No. 4 Sartian, Simms tracts, is drilling at 1,720 feet. J. W. Walton's No. 1 Roberts, west of Three Rivers, at 1,838-40 feet, set 4-inch packer which failed to hold, and waiting to get new packer to reset and test oil showing.

Medina County

C. W. Simpson's No. 1 Blocker, Survey 20, located 150 feet to north line and 305 feet to west line, at 1,240-49 feet while bailing to test sand water lowered till bailer caught on liner and pulled liner out, which loosened cement around casing, which is being recemented and liner will be reset and tested again. R. P. O'Brien's No. 1 Nixon, Survey 531, is standing at 1,007 feet waiting on pump. Medina Oil Co.'s No. 1 Taylor, Survey 135, being carried down to the Pennsylvania lime, is shut down at 1,000 feet. Cecil Switzer's No. 1 Zerr, Survey 459, is drilling around 3,300 feet. California-Medina's No. 1 Rothe is drilling around 3,300 feet, exact depth uncertain.

Maverick County

Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, center, is having casing trouble at 1,320 feet. Johnstone & Hout's No. 1 Whipff, 9 miles from Eagle Pass, is shut down at 1,220 feet. Rycade Oil Corp.'s No. 1 Chittim, Block 7, Section 129, has cable all out of the hole and tools loosened, total depth 5,592 feet; No. 2 Sullivan is drilling at 3,990 feet.

Milam County

Groneman Brothers' No. 1 Key (fee), Houston & Prewitt Survey, southern part of Milam County, and 4 miles southeast of Rockdale, at 1,970 feet, topped oil sand and are waiting on core to make test. Glass Brothers and others are rigging up their No. 1 deep test in the vicinity of Hicks. Yegua Oil Co.'s No. 1 Richards, J. H. Smith Survey, 6 miles southwest of Rockdale, a deep test, is drilling at 1,500 feet and expects the Minerva sand at 1,700 feet. W. A. Jones' No. 1 Smith, T. J. Chambers Survey, 150 feet to northeast lines and 810 feet to southeast lines and 3 miles northeast of Rockdale, is drilling in green sand at 1,150 feet. Michalk & Clark's No. 1 W. T. Johnson, J. J. Acosta Survey, 450 feet to NE cor. and 4½ miles north of Thorndale, is drilling at 900 feet.

McMullen County

C. H. Atherton is making location for the No. 1 Lark. R. L. Taylor's No. 1 Shiner, Survey 14, located 150 feet to SW cor., had derrick blown down and is rebuilding it. Nelson & Wood's No. 1 Shiner, Survey 48, Block 74, located 1,000 varas to east line and 350 varas to south line, at 900 feet, is shut down while crew is subpoenaed on lawsuit not connected with this test. George Pickett's No. 1 Jacob, Survey 7, located 660 feet to CNL, has completed contract depth and is standing at 3,030 feet with 9-foot core at bottom showing oil, will drill deeper.

Nueces County

W. L. Pearson's No. 2 Meaney, located 300 feet to south line of tract, is standing with derrick up, waiting on rig; No. 2 Weil, west of Corpus Christi, is swabbing at 2,360 feet.

San Patricio County

J. M. Davis' No. 1 Welhausen & Driscoll, exact center of Lot 8, Section 58, and 4 miles northeast of Gregory, is location with contract let for test. F. S. Smiley's No. 1 T. E. Wilson is location three-quarters mile northwest of Angelita. Huber & Crawford's No. 1 Mathis, Delgavo Survey, Block 17, located 300 feet to northwest lines and 2,500 feet to southwest lines, is standing at 2,516 feet. John Sigmund's No. 7 McCampbell is fishing at 4,012 feet.

Val Verde County

Magnolia Petroleum Co.'s No. 1 Whithead, Survey 81, located 1,900 feet to west line and 900 feet to south line, at 610 feet, is in white lime and shut down for repairs on water pump. A. Blume and others' No. 1 Moore, Section 183, at 330 feet to north line and 1,320 feet to west line, is abandoned at 2,890 feet. Douglas Oil Co.'s No. 1 Sellers, Section 82, Block A, had rig burned, down to 2,940 feet. Hiawatha Oil Co.'s No. 1 Sellers, Section 1,031, Block A, is straightreaming at 1,900 feet, total depth 2,600 feet. Crusoe-Williams' No. 1 Holman, Section 5, Block N, is drilling at 2,930 feet. O. O. Owens and others' No. 1 Henry Mills, C W half, Section 128, Block 1, is drilling at 2,491 feet with show of nonimflammable gas at 2,487 feet. Independent Operators' No. 1 Whitehead, SE SE, Section 30, Block 4, is shut down at 3,900 feet in lime. East Del Rio Oil Co.'s No. 1 Russell, Section 183, is drilling at 3,182 feet.

Wilson County

Thomas and others' No. 1 Aug. Haese, Survey 124, located 300 feet to NE cor., is repairing rig, total depth 1,210 feet.

Zavala County

B. F. Thompson's No. 1 West, West ranch, northern part of county, has everything ready to spud in except boiler, which is en route. J. G. Pundt's No. 1 West, Fuentes Survey, NW cor., east of Uvalde, is shut down at 210 feet, set 80 feet of 10-inch casing which is being pulled to reset at 210 feet.

LOUISIANA-ARKANSAS

(Continued from Page 48)

field and associates also are rigging up in Section 9 for No. 3 Murphy. E. M. Jones is drilling out cement at 2,147 feet in No. 2-A Lawton, Section 10. Total depth of this test is 2,447 feet. Magnolia Petroleum Co. is down 286 feet in No. 3 Murphy, Section 8, where 13⅜-inch casing has been cemented. Murdock and associates have a fishing job in No. 1 Vestal, Section 17. Total depth of the hole is 2,813 feet. Natural Gas & Fuel Corp. has set a short string of 4½-inch casing at 2,398 feet in No. F-5 Murphy, Section 9, and is bailing a sand encountered at 2,398-2,404 feet. Ohio Oil Co. is recementing 4¾-inch casing in No. 5 Murphy, Section 9. This test tested salt water at 2,736 feet. Southern Crude Oil Purchasing Co. has cemented a short string of 4½-inch casing at 2,704 feet

in No. A-5 Wells, Section 15. Stewart and associates are rigging up a rotary at No. 3 Murphy, Section 9, to drill out the cement. Total depth of the hole is 2,787 feet. The Sun Oil Co. has perforated the casing at 2,265-75 feet in No. 3 Hays, Section 3.

In the Louann Field, Magnolia Petroleum Co. has 20 feet of oil and 500 feet of salt water in the hole in No. 1 Union Lumber Co., Section 21-16-16. The test is shut down waiting orders. The flow is from a broken formation at 2,655-76 feet. J. J. O'Brien is drilling at 2,545 feet in No. 1 Saxon, Section 16.

Ouachita County

On the Ouachita County side of the Louann Field, F. A. Book will drill deeper in No. 3 Johnette, Section 33-15-16, after testing dry in a sand at 2,259 feet.

In the Norphlet Pool, Exchange Oil Co. has set a short string of 4½-inch casing at 2,362 feet in No. 3 Berg, Section 4-16-15, and is drilling in. This company's No. 7 Berg, same section, is pumping salt water from sand at 2,357-61 feet. No. 8 Berg is down 600 feet. Marine Oil Co. is drilling in sand at 1,950 feet in No. 10-A Snyder, Section 34-15-15. In Section 33, Phillips Petroleum Co. has cleaned out the hole in No. 15 Joyce, and is waiting on drill line. This test is down 2,639 feet. Roxana Petroleum Corp. has pulled the casing and abandoned No. 1 Reynolds, Section 27. It tested salt water at 2,689 feet. The Texas Company is setting 6-inch casing at 1,939 feet in No. 1 Spahr, Section 35-15-16, to test a sand encountered at 1,941-2,016 feet. Total depth of the hole is 2,122 feet. Unity Petroleum Co. is drilling out cement at 2,155 feet in No. 8-A Umstead, Section 33-15-15.

In the Stephens Field, Buffalo Oil Co. is drilling in gumbo at 1,410 feet in No. 3 Culp, Section 22-15-19. Magnolia Petroleum Co.'s No. 1 Morgan, Section 7, is down 2,900 feet in a lime formation.

Nevada County

Fruen and associates are drilling shale at 1,420 feet in No. 1 Rhodes, Section 22-12-21. Humble Oil & Refining Co. has cemented 6⅝-inch casing at 1,085 feet in No. 1 Heim, Section 1-14-21. In Section 6-14-20, Autrey Oil Co. is rigging up for No. 1 Hagnie. J. J. O'Brien has completed No. 2 Moss, same section, pumping 150 bbls. from same at 1,143-45 feet. No. 3 Moss, this section, has an oil sand at 1,153-58 feet and is waiting on a standard pumping rig. A rig already is up for No. 4 Moss. In Section 12, Zing and associates are coring a sandy shale at 1,161 feet in their No. A-2 Moss.

LA.-ARK. WILDCATS

(Continued from Page 48)

Tree as a result of a blow out earlier in the week. The well blew in making an estimated 20,000,000 feet of gas with a little water, from sand at 3,086-93 feet. In W. R. Ramsey's No. 1 Robertson, Section 22, the hole has been plugged back to 3,096½ feet and 6-inch casing cemented at 3,087 feet. In this same district, in Section 27, The Texas Company has staked a location for No. 1 Mays.

In Section 28-22-13, Walker and associates are drilling below 350 feet in No. 1 Antrim. Tubbs and associates have abandoned No. 1 Jacobs, Section 26-20-13, at a total depth of 3,335 feet. No test was made. Sligo Syndicate is drilling in anhydrite at 3,950 feet in No. 1 Jeter, Section 23-17-12. Palmer Corp.'s No. 4 Bossier, Section 9-16-11, is drilling hard lime at 4,501 feet.

Caldwell Parish

Grayson Oil Co. is down 2,165 feet in No. 1 Crockett, Section 6-12-4.

Claiborne Parish

Magnolia Petroleum Co.'s No. 1 Lee, Section 16-22-8, is being drilled deeper after testing salt water at 3,695 feet. Tate and associates' No. 1 Maddox, Section 21-23-7, also is being drilled deeper. It tested dry at 2,820 feet.

DeSoto Parish

Beery & LeGrande have moved the derrick and rig at No. 1 Giaque, Section 3-10-11. Hoosier Oil Co. is down 1,900 feet in No. 1 Berry, Section 5-11-11. Magnolia Petroleum Co. has set 6⅝-inch casing at 3,150 feet in No. 1 Logan, Section 17-10-12. Total depth of the hole is 3,173 feet. Reliance Drilling Co. is coring a sandy shale at 2,781 feet in No. 1 Jones, Section 8-11-14. Seip and associates have resumed drilling after a brief shut down in No. 1 Roberson, Section 18-10-12. This test is down 2,760 feet and is in a lime formation. The Texas Company's No. C-15 Sample, Section 26-13-12, is at a total depth of 2,455 feet where it is waiting on a standard pumping rig. This company's No. A-6 Wemple, Section 2-12-12, has 6-inch casing cemented at 2,400 feet.

Franklin Parish

Barbour Oil Co.'s No. 1 Baker, Section 3-15-7e, is drilling at 2,655 feet. Corvell and associates started drilling in No. 2 Moore, Section 12-11-6e, during the week but at present are shut down because of high water. Twelve-inch surface casing has been set at 180 feet.

Grant Parish

Paulette and associates have encountered an oil sand at 1,593-1,600 feet in No. 2 Holmes, Section 17-9-1e. A standard pumping rig is to be set up. Rue and associates have abandoned No. 1 Elias & Williams, Section 10-7-4w, following a dry test of a sand 2,096-2,104 feet. Swope and associates are drilling at 1,386 feet in No. 3 fee, Section 18-9-1e. Tunica Petroleum Co.'s No. 1 O'Bannon, Section 38-7-1e, has been abandoned as dry in the Wilcox at 2,497-2,507 feet.

LaSalle Parish

Tunica Petroleum Co. has completed No. 27 L. & A., Section 9-7-2e, pumping 10 bbls. daily with a little salt water from sand at 800 feet. This company's No. 33 L. & A., same section, has 400 feet of oil and water standing in the hole from sand at 768-74 feet. It is waiting on a standard rig for pumping. No. 34 L. & A., Section 8, is down 766 feet, and No. 35 L. & A., Section 9, is drilling at 735 feet. This company has a location for another test in Section 9. This will be the No. 36 L. & A. This company's No. 1 Lacroix, Section 8, has been completed as a 1,000,000-foot gasser from sand at 754 feet. No. 1 Whately, Section 9, is shut down waiting orders, having 600 feet of fluid in the hole from a total depth of 830 feet.

Natchitoches Parish

Lawson & Pharris encountered salt water in No. 1 Clark Morse Lumber Co., Section 23-5-6w, and have moved the rig and abandoned the hole at a depth of 2,853 feet. Ohio Oil Co. is drilling at 400 feet in No. 2 L. & A., Section 26-13-6w.

Rapides Parish

Minnesota Oil Corp.'s No. 1 Wettermack, Section 7-5-3w, tested salt water at 2,996 feet and has been shut down waiting orders. George Sabatier and associates' No. 1 Ritchie, Section 38-5-4, also has been shut down waiting orders at a depth of 2,750 feet.

Red River Parish

Alden Oil Co. is arranging to resume drilling in No. 1 Powell, Section 13-11-10. This test is in a shale formation at 2,730 feet. Hazlett & Simmons are drilling rock at 1,045 feet in No. 1 Neeley, Section 1-14-12.

Richland Parish

Gulf Refining Co. is cleaning out the hole in No. 2 Rhymes, Section 5-16-6e, preparatory to resuming drilling. This company has cemented 6⅝-inch casing at 2,314 feet in No. 2 Seibert, Section 11-16-5e. No. 1 Wayne, Section 36-17-5e, is being cleaned out. Depth of this test is 3,052 feet, where it has been shut down since the first of May because of high water. Ruston Drilling Co. has started operations in No. 1 McCoy, Section 30-16-6e, and is down below 50 feet.

Sabine Parish

Arkansas Fuel Oil Co. is down 2,965 feet in a lime formation in No. 1 Horn, Section 33-10-12, Pleasant Hill Field. No. 6 Logan, same section, is waiting a standard rig at 3,115 feet. No. 8 Logan, same section, is being reamed at 3,212 feet with the total depth of the hole at 3,230 feet. A standard rig is being built at No. 9 Logan, this section.

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The latter test is down 3,230 feet. No. 10 Logan is drilling chalk at 3,083 feet. No. 1 Williams, also in Section 33, is in a broken formation at 3,145-3,229 feet and is waiting on a standard rig. Magnolia Petroleum Co.'s No. 1 Hall, this section, is drilling lime at 3,121 feet. This company's No. 1 Rembert, Section 32, is in chalk rock at 1,890 feet. Morgan and associates' No. 1 Reese, Section 5-9-12, also is in chalk rock at 2,115 feet. C. W. Robinson and associates have cemented 6⅝-inch casing at 3,104 feet in No. 1 Hamlin, Section 6-9-13. H. P. Tate is drilling at 920 feet in No. 1 Cook, Section 23-10-11. L. M. Emlet's No. 7 Bowman, Section 14-7-14, has been shut down for rig repairs with the hole down 1,557 feet. This operator has cemented 12½-inch surface casing at 44 feet in No. 1 Mansfield, Section 15-7-14. Foster and associates' No. 1 Nabors, Section 30-10-12, is drilling below 75 feet. Frazier and associates have started a derrick for No. 1 Harris, Section 29-10-12. Magnolia Petroleum Co. is coring rock at 1,601 feet in No. 2 Louisiana L. L. L. Co., Section 2-6-11.

Webster Parish

W. T. Hunt has a fishing job in No. 1 Bistenau, Section 35-18-10. The hole is down 1,004 feet, where the roller bit has been lost. Shreveport-El Dorado Pipe Line Co. has a rig up for No. 1 Gamble, Section 33-20-8.

West Carroll Parish

Palmer Corp. has a derrick for No. 1 Pioneer, Section 16-20-10e, while Phillips Petroleum Co. has a rig up for No. 1 Marion, Section 32-20-9e.

Winn Parish

Dodge & Cordell are drilling shale at 1,405 feet in No. 1 Tremont, Section 35-13-3w. Ohio Oil Co. is arranging to set 6-inch casing in No. 1 McCarty, Section 5-12-1w, which blew out at a depth of 2,642 feet. H. M. Roark is drilling at 320 feet in No. 2 Southern Minerals Co., Section 19-11-3w. F. A. Schuman has moved the rig and abandoned No. 1 Albritton, Section 27-10-1e. The test was abandoned without a test after reaching a depth of 1,517 feet.

ARKANSAS

Union County

C. H. Allison and associates are drilling No. 1 Union Saw Mill Co. (formerly No. 1 Howard), Section 8-19-13, at a depth of 2,765 feet. This test tested salt water in a sand at 2,722 feet. Lion Oil & Refining Co. has a location for a test at No. 1 Craig, Section 4-18-18. Ohio Oil Co. has completed No. 1 Crain, Section 1-17-14, pumping 50 bbls. from sand at a total depth of 3,014 feet. This company already is down 530 feet in No. 1 Pumphrey, this section. W. D. Wingfield and associates are drilling at 2,257 feet in No. 1 Hadley, Section 2-18-13. This test cored the Nacatoch sand at 2,180 feet.

Ouachita County

Magnolia Petroleum Co. has cemented 8¼-inch casing at 2,092 feet in No. B-1 Stout, Section 28-14-16, after encountering a sand at 2,095-97 feet.

Ashley County

Glassell and associates have a derrick up for No. 1 Keller, Section 10-19-5.

Calhoun County

Arkansas Natural Gas Co. is drilling soft sand at 2,837 feet in No. 1 Stout, Section 2-13-14.

Columbia County

Atlantic Oil Producing Co. has abandoned as dry at 3,151 feet its No. 1 Couch, Section 23-17-20. No test was made. Golquitt & Thomas also have abandoned No. 1 Duffer, Section 23-18-19, without a test, having reached a depth of 3,015 feet. Lion Oil & Refining Co. has abandoned No. 1 Pattee, Section 20-18-18, at a total depth of 3,086 feet. Mitchell & Eylers have abandoned temporarily No. 2 Bodcau, Section 4-20-21. This test is down 2,804 feet.

Grant County

Jones & Watkins' No. 1 Meek, Section 5-4-11, has been shut down until repairs are made in the water well. The hole is down 1,100 feet.

Lincoln County

Pine Prairie Oil & Gas Co.'s No. 1 Carter, Section 33-10-6, has been shut down at 1,750 feet pending the laying of a water line.

Miller County

Lenz and associates have cemented 4½-inch casing at 3,040 feet on a sand claimed to be showing oil. Total depth of the hole is 3,049 feet.

GULF COAST FIELDS

(Continued from Page 53)

lands, about 1 mile south of the new producer.

The two most interesting tests outside of the pools proper are the Pure Oil-Humphreys Corp.'s No. 1 Armstrong and the Associated Oil Co.'s No. 1 Seaburn, off the Stratton Ridge Dome in Brazoria County. The former has set casing to test 18 feet of sand at 4,200 feet and will drill out the plug about Sunday. The Associated Oil Co.'s well is fishing at 4,085 feet but drilled into 15 feet of likely looking sand, which it will test. The Gulf Production Co.'s No. 2 Perry, on the south side of the dome, is sidetracking around 2,200 feet. It drilled to 3,160 feet, but lost pipe in the hole.

SOUTHWEST TEXAS

(Continued from page 51)

lingen Oil & Gas Co.'s No. 5 Martinez is testing last report at 1,021 feet.

Rockdale Field-Milam

Noack & Laning's No. 1 Neely, William Allen Survey, 150 feet to SE cor., is shut down. Noack Oil Co.'s No. 7 Seelke, T. J. Chambers Survey, 300 feet southeast of No. 6, is location. Rockdale Development Co.'s No. 3 Lorenz, Thompson Survey, has set casing to bring in. McCormick & Noack's No. 1 Taylor Wooten, William Allen Survey, center, has been cemented to bring in. Coffield & Hale's No. 1 Shelton, south of Rockdale, is ready to spud in.

Refugio Gas Field-Refugio

Houston Gulf Gas Co.'s No. 4 Shelly, fishing at 2,100 feet; No. 7 Lambert is drilling at 1,500 feet; No. 2 Lambert is drilling at 2,400 feet; Moody's No. 1 Wilson Heard is drilling below 1,920 feet. Houston Oil Co.-Pratt Hewitt's No. 5 Rooke is rigging up over old hole, depth 2,400 feet. William F. Morgan's No. 2 Rose Rogers, half a mile from production, is shut down at 2,440 feet; No. 1 S. J. Ryals, in center of field, is drilling at 2,680 feet.

Adams Gas Field-Medina

Western Gas & Fuel-Medina Syndicate's No. 3 Chandler, located 200 feet to north line and 1,400 feet to west line of lease, is drilling on hard rock at 20 feet. Western Gas & Fuel-Witherspoon Oil Co.'s No. 3 Adams, Block 7 of Adams ranch, 400 feet to east line of lease, is rigging up. Witherspoon Oil Co.'s No. 1 L. J. Schmidt, Survey 526, at 800 feet to north line and 400 feet to east line, has set 10-inch at 80 feet; No. 3 J. P. Nixon, Survey 119, located 150 feet west of No. 2, the wild gasser, has set surface casing at 160 feet; No. 1 Nixon, Survey 527, located 800 feet to south line and 400 feet to east line, is location.

Luling Field-Caldwell

Magnolia Petroleum Co.'s No. 10 Tiller, J. Henry Survey, 400 feet southwest of No. 1, is rigged up ready to spud in; No. 15 Stair, J. Henry Survey, 300 feet northwest of No. 12, is drilling at 2,014 feet. North & South's No. 1 Kelly has tools loose at 6,956 feet and is drilling; No. 2 Tiller is drilling at 6,412 feet.

Somerset Field-Atascosa & Bexar

Grayburg Oil Co.'s No. 14 Ed Wells, J. R. McKinney Survey, 1,500 feet to west line and 3,400 feet to north line, has set 6⅝-inch at 1,250 feet and is bailing at 2,000 feet; No. 38 Ernest is drilling at 450 feet. G. E. Ginter's No. 1 Gayle, C. A. Yoakum Survey, is location 2,750 feet to north line and 150 feet to east line. Associated Petroleum Co.'s No. 16 Caruthers is location 604 feet south of No. 2; No. 2 Ernest, Survey 266, is location 550 feet west of No. 1.

Kingsville Field-Kleberg

Houston Oil Co.-A. C. Erwin's No. 1 Kivlin, Section 50, Lot 7, at 660 feet to SE cor., is drilling in gumbo at 2,640 feet. Houston Oil Co.'s No. 1 Kissman, Section 41, Lot 9, is location and derrick

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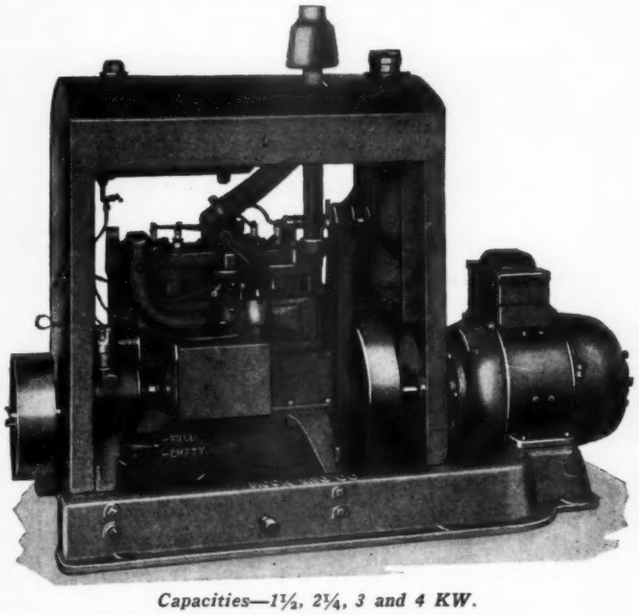

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material has been ordered out. Humble Oil & Refining Co.'s No. 4 R. J. Kleberg, Section 40, Lot 6, located 660 feet to east line and 810 feet to south line, has spudded in; No. 1 Gulf-Dennett, Section 38, Block 18, located 630 feet to west line and 150 feet to north line, at 2,121-31 feet cored oil sand with good saturation; No. 1 Kleberg, trustee, Section 40, Lot 8, at 150 feet to NE cor., is coring at 3,800 feet; No. A-3 Dennett, Section 39, Lot 2, NW cor., is shut down at 2,740 feet; No. 1 Kivlin, Section 39, Lot 4, NW cor., is at 3,070 feet waiting on orders.

ROCKY MOUNTAIN AREA

(Continued from Page 55)

at Cheyenne, where the oil firms received help in previous attacks of this nature.

Opened Notches Field

The Midwest Refining Co. has opened the Notches Field to production again after a shutdown of more than a year. This is a black oil field located in Natrona County, Wyoming, with a special pipe line to the railroad and the production is used to supply the Casper refinery with the crude needed for making asphalt and asphaltic paints.

The Midwest Refining Co. has one well on the Notches Dome and this well when opened last week, started off with a production of about 250 bbls. daily. It is holding up at that figure but only about 60 bbls. are being sent through the pipe line, the rest of the production is being sent into storage in the field. This oil is rather heavy and congeals readily, so a special pipe line, insulated to hold heat was laid by the Midwest Refining Co. from the Notches Field to the Burlington Railroad to deliver the oil into tank cars. With the line well insulated, it has been found possible to pump this oil after heating in the field, in almost any weather. The line is 4 miles in length.

A shale well that is expected to open a new field struck oil on Elk River Dome, Routt County, Colorado, drilled by Mitchens Syndicate, at a depth of 2,600 feet. This well is located about 8 miles west of Steamboat Springs.

New Leasing Laws

The State of Montana has passed a new set of regulations regarding the leasing of state lands to oil operators. The new form of the regulations was adopted by the State Board of Land Commissioners last week and will be in effect at once on all leases granted, though it will not be retroactive on leases granted before the regulations were adopted.

Instead of the old one-eighth or 12½ per cent royalty, the new regulations require the payment of a sliding scale royalty as follows: 12½ per cent royalty on all production up to 3,000 bbls.; 17½ per cent on all production from 3,000 to 6,000 bbls.; 25 per cent on all production over 6,000 bbls.; 12½ per cent flat on all gas production. All production to be figured on a monthly basis.

An annual rental of 75 cents per acre is also required, whether there is production on the land or not and the lessee must furnish a bond of $1,000 or more at the option of the commissioners.

Dutton Creek Field

A new field, Dutton Creek, has been added to the list of Wyoming oil fields the past week. This field was discovered by the Midwest Refining Co. several months ago and it is now running oil from the single producing well there to the Rock River pipe line leading to Laramie, where the Standard Oil Co. of Indiana has its refinery.

The Dutton Creek Field was discovered by Max W. Ball and John Barton, the latter is the head geologist of the Midwest Refining Co. It is located on Section 36-19-78, in Albany County, Wyoming, about 30 miles northwest of Laramie.

The area is covered with a late Tertiary overlay that effectually hides the existence of any folds or action in the underlying strata and only in one small spot was the Cretaceous strata exposed so that it could be seen. Working from this single exposure, the geologists became satisfied that there was a structure under the surface of the Tertiary overlay and the Midwest Refining Co. was prevailed upon to drill some shallow holes to prove this theory. The oil company moved in a water well machine and drilled 27 shallow holes through the Tertiary overlay and into the top of the Cretaceous so that the hidden structure was easily mapped from the drill hole records.

On this basis, the geologists made a location and the Midwest Refining Co. drilled a deep test that found oil in commercial quantities about 5,000 feet deep. This well has been shut in for some time due to the overproduction of oil in other regions, but was placed on production last week and averaged 120 bbls. daily runs for the seven days.

RUNS FOR THE WEEK

Salt Creek	43,820
Teapot	810
Big Muddy	2,690
Grass Creek	2,740
Elk Basin	880
Greybull	20
Rock River	2,760
Rex Lake	160
Dutton Creek	110
Notches	80
Lance Creek	630
LaBarge	310
Poison Spider	1,000
Osage	340
Hamilton Dome	1,660
Mule Creek	1,040
Lander	210
Byron	80
Lost Soldier	2,970
Ferris	60
Simpson Ridge	10
Cat Creek	2,230
Lake Basin	140
Sunburst	13,000
Iles Dome	475
Moffat	1,650
Walden	130
Florence	800
Tow Creek	890
Fort Collins	3,200
Boulder	25
Rangeley	100
Hogback	760
Rattlesnake	240
Table Mesa	320
Artesia	1,700
Total	86,280

VENEZUELAN OUTPUT LARGER DURING MAY

Oil production in Venezuela in May totaled 4,630,275 bbls., averaging 149,363 bbls. daily, compared with total of 4,274,793 bbls., an average of 142,502 daily, in April. In May, 1926, total was 2,895,977 bbls., average of 93,420 daily. Production in the five months ended May 31, 1927, totaled 22,891,136 bbls., compared with 13,921,070 bbls. in corresponding 1926 period. Shipments in the first five months this year totaled 18,063,642 bbls., against 12,825,236 in the 1926 period.

Production by companies in May and April, with comparative figures in May, 1926, in barrels, follows:

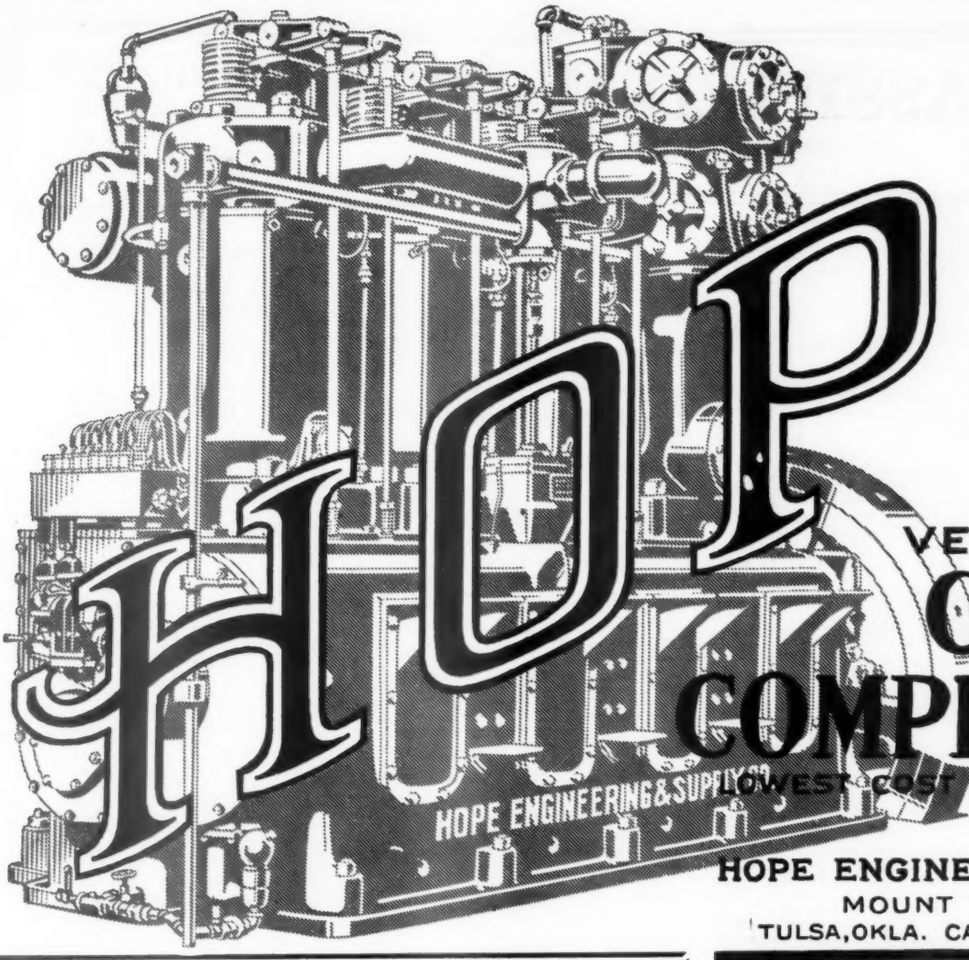
	May	April	May, '26
V. O. C.	1,736,595	1,675,332	934,500
Gulf-Creole	393,619	354,726	192,000
Gulf	269,300	226,581	258,000
Gulf-V. Pet.	291,400	259,000	.....
Lago Oil	1,049,446	1,074,651	565,005
Lago-Maxud	53,051	16,473	.....
Carib. Pet.	589,000	412,400	727,000
B. C. O., Ltd.	202,864	211,830	219,472
Gen. Asphalt	45,000	43,800	.....
Total	4,630,275	4,274,793	2,895,977

May shipments totaled 3,796,507 bbls., average of 122,467 bbls. daily, against 3,451,504 bbls., average of 115,041 bbls. daily, in April. Shipments by companies in May and April, and shipments in May, 1926, in barrels, follow:

	May	April	May, '26
V. O. C.	1,328,322	1,383,200	889,000
Gulf-Creole	261,653	231,328	190,000
Gulf	249,700	194,793	190,700
Gulf-V. Pet.	270,676	182,618	.....
Lago Oil	866,178	774,365	677,544
Lago-Maxud*	.....	.....	.....
Carib. Pet.	569,200	413,400	640,000
B. C. O., Ltd.	205,778	228,000	208,000
Gen. Asphalt	45,000	43,800	.....
Total	3,796,507	3,451,504	2,795,244

*Crude is topped at La Rosa refinery.

Lagunillas continued the leading field, producing 2,107,112 bbls. in May, an average of 67,971 bbls. daily, compared with 2,107,526 bbls., or 70,251 bbls. daily, in April. La Rosa produced 1,500,779 bbls., 48,412 bbls. daily, against 1,312,388 bbls., an average of 43,746 bbls daily, in April. Mene Grande Field produced 589,000 bbls. in May, average of 19,000 bbls. daily, compared with April total of 412,400 bbls., 13,747 bbls. daily. In May, 1926, Lagunillas was not producing, while La Rosa produced 1,630,505 bbls., average of 52,597 bbls. daily, and Mene Grande produced 727,000 bbls., an average of 23,452 bbls. daily.



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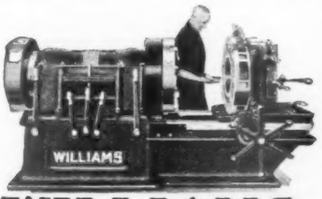
A complete set of dies for the 12-inch RAPIDUCTION weighs only eight pounds. A set of dies for other machines weighs 144 pounds for the range. You can see what a saving in time these features assure—and what a cut in production costs. A change of dies on a RAPIDUCTION takes only a few seconds.

The Williams line includes the machine that will give you *greater production* at less cost. Write for our bulletin, and time studies.

WILLIAMS TOOL CORPORATION, Erie, Pa.

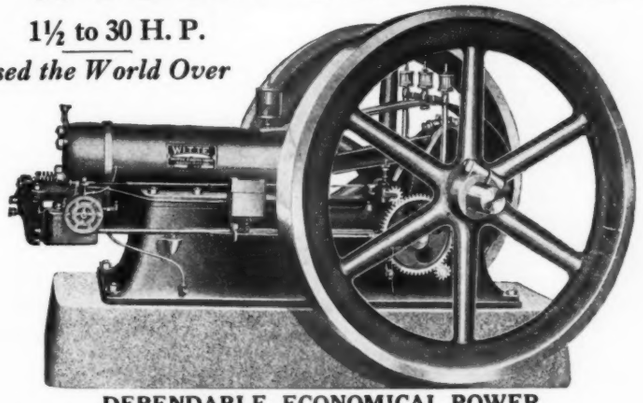


WILLIAMS
RAPIDUCTION
POWER PIPE MACHINE

WITTE ENGINES

1½ to 30 H. P.

Used the World Over



DEPENDABLE, ECONOMICAL POWER

For Oil Fields, Cotton Gins, Factories, Saw Mills, Etc.

The Witte Heavy Duty Engine is made only in the 20 and 30 H.P. sizes for heavy continuous work involving running for more than twenty-four hours at a time. Complete oiling system for every bearing so arranged that you need not shut down the oil. Geared Centrifugal Water Pump for circulating water and spraying it. Tank is in base securely supported a slight distance from the foundation. You will find this a real dependable and economical engine. Now, more than ever, the need for economical, dependable power, is felt by the producer who is faced with ever increasing labor costs. Witte Throttling Governor Engines answer this problem—with the Witte you get more engine power for less cost and less upkeep.

Throttling Governor—the original and leader of the Throttling Governor type. An even, steady speed with big surplus of power for heavy loads. The Witte Engine burns kerosene, gasoline, gas oil, distillate or gas, at a fuel cost of less than 2c an hour per H.P. Simple, trouble proof, and guaranteed for a life-time of hard work.

Write for Free Book. Send today for my big, free catalog in colors. Tells all about the new Witte improvements and new sales terms. It's really a mechanical education to read this book, for I have written it after a life-time of practical experience. Write for it today, sure.

The Witte Engine comes completely equipped with Wico-Magneto speed and power regulator and Throttling Governor, square, protected tank and cast removable bearings. The Witte is regarded the world over as the STANDARD for real economy and life-long dependability.

No matter whether you plan to get an engine now or later—no matter whether you happen to have my old catalog—write me today, sure, for this big, new catalog and learn about all my new improvements and new terms. Do not think of buying any engine, sawing rig, or pumping outfit until you have got all these facts. Write today for free facts. No cost or obligation.

3 Hours Shipping Service

WITTE ENGINE WORKS, Dept. W
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302-B Empire Bldg., Pittsburgh, Pa.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

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CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—EQUIPMENT
5 Dean Triplex Pumps, 5 by 8.
1 No. 2, 1 No. 5, 1 No. 6, 1 No. 7, 1 No. 10, 1 No. 11 Sweetland Oil Filters.
Two 10-inch S. Roturbo Centrifugal Pumps. Six 10-inch S. Centrifugal Pumps. Steam Turbine.
Storage Tanks. Send for list.
Send us your inquiries. We buy your surplus equipment.
CONSOLIDATED PRODUCTS CO.
15 Park Row, N. Y. C. Barclay 0603.

A BARGAIN, two new four-room sectional houses. Will erect any where. Foster 3-1581, 115 S. Boston, Tulsa, Okla.

TANK FARM FOR SALE
100 acres with 10—55,000-bbl. tanks and usual accompanying equipment. For further details see display advertisement on page 118.
GALENA-SIGNAL OIL CO.
of Texas
P. O. Drawer "A", Houston, Tex.

FOR SALE—Two 28 Star drilling machines. Good condition, well equipped. Located Anderson County, Kans. Address Box 107, Colony, Kans.

FOR SALE DRILLING MACHINES, TOOLS AND CASING
3-no. 27 Star Machines with tools.
1-4" Parkersburg chain machine, tools. A good assortment of drilling and fishing tools in first class condition.
1100'—12½" casing like new.
Mid-Egypt Gas & Oil Co., Ava. Ill.

USED LINE PIPE AND CASING FOR SALE
7—25-h. p. used gas engines.
10—6-in. standard rigs.

15,000 ft. 5⅛-in. used casing.
15,000 ft. 6⅝-in. used casing.
10,000 ft. 8¼-in. used casing.
5,000 ft. 10-in. used casing.

75,000 ft. 3-in. used line pipe.
50,000 ft. 4-in. used line pipe.
20,000 ft. 6-in. used line pipe.
For immediate shipment from our Texas yards.
KEYSTONE PIPE & SUPPLY CO.
607 Holmes Bldg.,
Fort Worth, Tex.

1,400 FEET ten inch forty pound used casing, extra good condition. 4-2328; 440 West 29th St., Oklahoma City, Okla.

ENGINE—50 Horsepower twin cylinder Miller Gas Engine complete with starter, 240 volts, 3 phase, 60 cycle generator; in A-1 condition. Shepard Elevator Co., 2425 Colerain Ave., Cincinnati, Ohio.

DIESEL
GENERATOR
UNITS
Like New

3—625 kva., Allis-Chalmers Generators, 3 phase, 60 cycle, 2,300 volts, 180 r.p.m., direct connected to 750 hp, Busch-Sulzer-Diesels, with direct connected exciters. Units are modern, have seen hardly any service, practically good as new. Can be demonstrated operating. Complete details and photo on request.
EQUITABLE EQUIPMENT CO., INC.
410 Camp St., New Orleans, La....

TENTS, STEEL COTS, pads, blankets, new and used. Specialize on equipping oil field construction camps. Get our prices before buying. We save you money.
DALLAS TENT & AWNING CO.
Dallas, Texas

EFFICIENT help can best be obtained if you go after your man by using The Oil and Gas Journal Classified Ads.

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TANK TABLES—Machine Made
Accurately computed, lowest price.
Mid-Continent Tank Auditing Co.
108 Tuloma Bldg., Tulsa, Phone 4-1410
O. R. TISDALE, B. S., C. E.

MANUFACTURING MACHINISTS

CRAGO CUT GEARS
Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

BUSINESS OPPORTUNITY

NOTICE
Here is a great opportunity for an oil and gas producing company. I have about 1,000 acres of oil and gas leases in a good location which were laid out by an expert geologist. The location is at Manistee County, Michigan.
Also new oil derrick on the same leases. Derrick 84 ft. high; wooden and ready to install machinery for operation. For sale for the price of derrick construction and material cost or if desired to operate, I will be pleased to arrange to loan the derrick and furnish leases for an interest in the well. For particulars write to
JOHN BASSARAB
Crucible Steel Co. of America
LaBelle Works N. S. Pittsburgh, Pa.

OIL MEN! Attention! If you want to take an oil man's chance with me on a Brown County well for a little money, write particulars. Driller, Box 803, Cisco, Tex.

CAPITAL—An experienced dependable broker with following will aid in financing a worth while proposition. B. W. 810 Broad St., Newark, N. J.

INCOME PROBERTY
FORD AGENCY—Building and drive-in; now under construction in one of the best county seat towns on South Plains. Wheat and cotton belt. Corner; Fort Worth-Roswell highway. Leased 3 years in advance for $200 per month. Sixe 100x80 feet. Will sell on good terms or trade equity for clear farm land on South Plains only.
J. J. MURPRY
Crosbyton, Tex.

IF YOU have money to invest in greatest values in agricultural and ranch lands carrying possible oil and gas and other mineral values; let us know in what, and where you wish to invest. We will be glad to serve you. Box No. 723, Phone No. 778W. Duncan, Okla.

FOR SALE—3,000 acre goat and sheep ranch, and pecan farm. 5 miles river bottoms, 400 acres tillable, balance grazing land $10. per acre cash or terms. Thos. B. Hughes, 4215 Ave. H., Austin, Texas.

WILL GIVE drilling contract on 10,000 acres, Louisiana oil belt. Box 653, Kansas City, Mo.

DO YOU KNOW the best securities listed on the New York Stock Exchange? If you want to get in on the ground floor just ask—
HARRY W. NELSON STATISTICAL SERVICE
Distinctive Investment Counsel.
1231 15th St. S. W. Canton, Ohio

WILL GIVE ONE-HALF interest in NW ¼ of 25-20-10 and SE ¼ 25-20-10 for Turkey Mountain test. Good geology. Bartlesville gas production offsets North and oil production southeast. Box 495, Sand Springs, Okla.

NEVER FAIL LOCATORS on oil & gas. Write for particulars. Redmon & Bulk. 312 Cherokee, Humboldt, Kans.

WE CAN furnish necessary capital for development of good oil and mining properties. Let us solve your financial problem. Highest references.
LINCOLN ORGANIZATION
360 North Michigan Avenue
Chicago, Ill.

SOUTH TEXAS LAND offers best investments. Have listings of large tracts in fast developing sections suitable for subdivision at bargain prices. Also farms and small tracts. Southern Colonizing Co., Gunter Bldg., San Antonio, Tex.

BROKERS-SALESMEN
Sound seasoned successful Royalty Company wants expansion capital easy selling issue. Pays monthly dividends, revolving depletion fund insures dividends. Full co-opertaion, many repeats. For particulars, write E. F. Hyland, 1118 Detwiler Bldg., Los Angeles, Calif.

BUSINESS OPPORTUNITY

$59 BUYS 2½ Ozark Acres—Furnish buyer, 4 hens, 50 grapevines, 550 strawberries ;near Potosi. $8 down, 75 cents weekly; cash price, 48; warranty deed; perfect title. Mrs. Mottaz, 6015 Maple, St. Louis, Mo.

1,500 ACRE ranch in Lampases County, all open prairie land. Clear of indebtedness. Will trade for clear income property in Texas. Address Owner, Box 236, Clifton, Texas.

GAS PROPOSITION
GAS FRANCHISE on town which will effect approximately 250 meters to net 50 cents per 1,000 cubic feet; estimated earning capacity $25,000 per year; also oil and gas leases on 1,600 acres practically proven gas territory; four sands 1,000 to 2,000 ft. Wonderful oil possibilities; Greenwood County Kansas. Need financial assistance. Box 116, Severy, Kans.

A ST. LOUIS OIL COMPANY
Well established and completely equipped storage plant, tank and delivery trucks, service stations, etc.; excellent personnel; distributors nationally advertised brand gasoline and oil. A real buy. Address Box B-880, The Oil and Gas Journal, Tulsa, Okla.

STORAGE TANKS FOR LEASE
6-55,000 bbl.
1-25,000 bbl.
Located at East St. Louis.
Address Box I, Okmulgee, Okla.

OIL CORPORATION, well financed wants large block for drilling test well. Send details and proposition. Box 492, Wichita, Kans.

HAVE SEVERAL ROUGH ranches in South West Texas for sale; ranging from three to four dollars per acre. These ranches have all oil rights.
A. M. Sullivan, Coahoma, Texas

FOR SALE—PETS

WHITE COLLIES for sale — One brood matron; one male pup 2 months old. A. K. C. registry. Dr. Knotts, Stillwater, Okla.

POSITION WANTED

YOUNG OIL EXECUTIVE open for connection. 12 years practical experience in field and office, superintending, leasing, drilling, and producing. Thoroughly familiar with all details pertaining to oil and gas field operations, rotary or cable tools, Kansas, Oklahoma, and Texas. Also several years in accounting, office, sales and traffic manager of refineries. Age 38; Married. Address Box B-911, The Oil & Gas Journal, Tulsa, Okla.

PRODUCTION Superintendent 20 yrs. experience with cable and rotary tools in Okla., Ark. and Louisiana; can handle any kind of air, or pumping production on any kind of formation. Best references. Box B-875, The Oil and Gas Journal, Tulsa, Okla.

PRODUCTION SUPERINTENDENT 25 years experience in all fields where different sands are encountered, familiar with all details and geology; desires change; best references. Box B-896, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Position as scout or land department. Been scouting and land work, West Texas, five years. Familiar with county records and position of drilling wells, 15 years different capacities in oil business. References furnished from company last employed. Member National Oil Scout Association. Address Box 191, Big Lake, Tex.

MAN WITH 18 years experience in steel erection of oil refineries, such as steel plate, structural, handling and raising heavy equipment, dismantling and rerection. Also considerable experience in concrete, brick and building construction. Wishes connection with progressive company. Can furnish the best of references as to my ability. Age 35. Box B-912, The Oil & Gas Journal, Tulsa, Okla.

POSITION WANTED

MAN with iniative, well qualified, reliable references, wants position as representative securing blocks, drill propositions of merit, negotiating with substantial oil operators. P. O. Box 492, Wichita, Kans.

HELP WANTED

SEVERAL FIRST CLASS Engineering Draftsmen and checkers for concrete designing, structural work and tank design in connection with oil refineries, permanent positions. Give age, experience, reference, salary, and date available. Box B-922, The Oil and Gas Journal, Tulsa, Okla.

REFINERY DRAFTSMAN
Must be good draftsman, thoroughly acquainted with oil refinery layout. College trained men preferred. Location Jersey City, N. J. Box B-920, The Oil and Gas Journal, Tulsa, Okla.

FOREIGN WORK
Men wanting work with the large oil companies in foreign fields write immediately to the Foreign Service Company, Cotton Exchange Bldg., Fort Worth, Tex.

WANT YOUNG geologist to go on expense account without salary for interest in findings. References exchanged. Box B-925, The Oil and Gas Journal, Tulsa, Okla.

OIL FIELD PROMOTION MAN

ENGINEER: civil or mechanical, technical training and experience preferred, to head Promotional Department for new material of unusual merit, for large middle-Western manufacturer; material is greatly improved staple in general use in oil fields, ability to meet and work with oil well superintendents, purchasing agents, and drillers, essential. Position necessitates considerable traveling. Applicant must possess good character, and be able to represent his principal with dignity and credit. Write in longhand giving complete information about yourself, including education, experience, age, whether married or single; all replies in strict confidence. Address Box B-913, The Oil & Gas Journal, Tulsa, Okla.

FOREIGN WORK MEN interested in oil, mine, railway work., etc., in South America, write at once. South American Service Bureau, 14,600 Alma, Detroit, Mich.

GEOLOGIST

H. L. BALDWIN
Petroleum Geologist
Telephone 74
Fort Stockton, Tex.

ENGINEERS

E. A. HERBIG & COMPANY
Expert testing and repairs on all kinds of gas meters, meter clocks, and vacuum and pressure gauges. Physical testing and charcoal testing. Charges reasonable.
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402 Central National Bank Bldg.
Tulsa, Okla.

MONEY RAISING

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 131 E. 13th, Oklahoma City, Okla.

DO YOU NEED MONEY?
Worthy propositions refinanced on long time basis. No promotion schemes or fakes will be considered. Address Box B-900, The Oil and Gas Journal, Tulsa, Okla.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

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MAIL your advertisement now. It will be published next week. Cash with order.

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NEW MEXICO STATE LEASES
Complete abstracts of title, full records of present ownership all State leases in any township prepared by
F. S. DONNELL, Bonded Abstractor
Santa Fe, N. Mex.

Sec. No. 436, Blk. D, Jno. H. Gibson Sur., Yoakum County, Texas; $1.50 bonus; 50 cents rental 5 or 10 yrs. or $5 per acre for royalty. C. B. Alexander, 1929 So. Fifth St., Abilene, Tex.

FOR SALE — Leases and royalties Reagan and Pecos Counties, Texas. T. W. Suttlemyer, Big Lake, Tex.

WILD CAT
50,000 acres Hudspeth County, Texas; $1.50 bonus, $1 to State. Think it over. Clyde Realty Co., Clyde, Tex.

GAINES and Yoakum Counties, cheap leases. Drilling blocks Lynn and Terry Counties. Will furnish geology. 3,500-foot test; small bonus. F. P. Simpson, 517 Worth Bldg., Fort Worth, Tex.

500 ACRES between large leases and 4 producing Fields. Pipelines and R. R. on land. C. Brown, 6012 Brady St., Houston, Texas.

SOUTHWEST TEXAS — WINKLER, Loving, Reeves, Ward, Pecos, Culberson Counties.
Drilling blocks, Leases. Royalties. Ranches in fee.
H. F. Anthony, Pecos, Tex.

FOR SALE—Leases and production in Warren, Allen and Barren Counties. Have leases in Barren County joining producing leases and some within half-mile to 1 mile of production. W. P. Harley, Bowling Green, Ky.

FOR SALE or Lease—Forty-four acres, well improved, one-half mile C. I. A.; $8,000; one-half mineral rights; $9,000 all. M. W. McMinn, Box 715, Denton, Tex.

LEASES, Royalties and Drilling Blocks in Eastland, Stephens, Callahan, Coleman and Brown Counties, Noell and Gray, Garner Bldg., Cisco, Texas.

LEASES; drilling blocks; fee lands; anywhere; confidential reports; information. Box 620, Fort Stockton, Tex.

FOR LEASE
19 surveys Block G-14; 21 surveys Block G-15, Brewster County, Texas, will lease all or part; make best offer. Fee owner, Earl K. Duke, P. O. Box 1099, Wichita, Kans.

COMPLETE ABSTRACTS of title to all lands in Winkler County, Texas, compiled by Kermit Abstract Company, Kermit, Texas.

SOUTHEAST NEW MEXICO
Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.
H. T. ORCUTT
1114 Colcord Bldg., Oklahoma City, Okla.

FOR SALE in Breathitt County, Kentucky, 2,000 acres, six wells, present production 20 barrels; all proven territory. Plenty of gas for operating.
E. D. WATKINS
Irvine, Ky.

"IN THE TREND"
Southeastern New Mexico and West Texas counties — Lea, Eddy, Chaves, Gaines, Andrews, Winkler, Loving, Ward, Culberson and Pecos Counties, oil and gas leases, royalties and drilling blocks. We buy and sell. F. S. Blackmar, P. O. Box 541, Roswell, N. Mex.

FOR SALE—Selected oil and gas leases adjoining producing and drilling leases in Barron County, Kentucky. At right prices. J. C. Preston, Glasgow, Ky.

FOR SALE—Oil leases in Cimarron, Texas, Beaver and Woods counties. Orbee Lease Co., 1114 Colcord Bldg., Oklahoma City, Okla.

LEASE LAND, sell royalties; Howard, Glasscock, Andrews, Martin, Terrell and Pecos Counties. One dollar an acre up. Joe Cunningham, Big Springs, Tex.

ALLEY, SMITH & PARKS
Crane and Ector County Surveyors
Civil Engineers
COURT HOUSE, ODESSA, TEXAS

LEASES—PRODUCTION

320 ACRE LEASE, $4 per acre, 1¾ miles S. E. Ohio well and S. W. of Midwest well, Quay County, N. Mex. K. E. Drake Jordan, N. Mex.

2,000 ACRES adjoining Standard Oil's 4,000 barrel well at Walden; will sell all or part or will lease; also have 150 barrel well at Florence on 480 acres. Apt. 10, 325 East 18th Ave., Denver, Colo.

FOR SALE—1,900 acres oil leases near Heritage and Red Boiling Springs. NE cor. Macon County; NW cor. Clay County, Tennessee; 25 cents per acre. E. C. Silvers, Leesburg, Ind.

"WEST TEXAS"

PECOS COUNTY—4 sec., lease 10 yr., NE part of county, $1.50 bonus, rentals 50 cents. 2 sec. W part of county, 10 yr., $1, 50 cents. One block of 10 lots, full sized, Fort Stockton. For the entire lot, $400, cash or your terms at 8 per cent. 720 A. Block 12, adjoins Humble, Roxana & Std. of Calif. about 2 miles from Pecos river and 20 N. E. Yates Field. 10 yr. lease, $7.50 with 50 cents rentals.

Brewster County. I have a number of scattered sections at $2.50 to $4 fee, unleased in the play. Will sell one or more. Also 16-640 A. ranch, house well, springs, creek; excellent hunting. $2.25 per acre. $10,000 will handle; unleased for oil. The cheapest buy in all West Texas. 200 A. fee, unleased $2.75 per acre.

Presidio County. 9,500 A. 10 yr. lease, 20 cents bonus, 10 cents rentals. 2 sections, fee, $2.50.

Terrell County. 7 sections, fee, leased for oil to expire July, 1928. $2.25 per A.

Oil operators—I have 60,000 A. solid body, NE, Brewster County, 10 yr. paid up lease, no drilling obligation. Adjoins large company holdings. Good geology. Price, $1.25 will sell 15,000 A. and up.

J. S. JONES

First National Bank Bldg.,
Fort Stockton, Tex.

LEASES around the V. T. Bolin well in Howard's Draw, south central Crockett County, Texas, in direct trend from Yates Field across river in Pecos County. Well fully financed and now setting 10-inch casing at 2,110 feet; contract depth 3,500 feet. Write for maps, prices, etc. V. T. Bolin, 510 Floyd Holmes Bldg., Fort Worth, Tex.

OIL LEASES and royalties, Ector, Crane, Pecos, Reeves, Ward, Upton and Winkler Counties; buy or sell. C. H. C. Anderson, 712 Linz Bldg., Dallas, Tex.

WINKLER—PECOS COUNTIES
Leases and Royalties
W. S. PATTERSON
Pecos, Texas.

BARGAINS IN New Mexico State leases, straight leases and government permits all over State. Prices range from 50c per acre up. Advise in detail your requirements. WYLIE & BLINEBRY, 319 Martin Bldg., El Paso, Texas.

TO THE SMALL INVESTOR

The average success in wildcat drillings is one producer out of every four tests.

For $10 I'll agree by contract to carry you in on a one-fortieth interest in four 40-acre New Mexico leases estimated to be located on structure and near drilling wells in four different counties.

I will pay the expenses and pro rate the ultimate profit when leases are sold.
CHAS. E. PARROTT
Arcade D, Amarillo Bldg., Amarillo, Tex.

DRILLING BLOCK secured on approved acreage and well supervised; no bonus; we keep some acreage as fee. Nicolle, Petroleum Geologists and Operators. Box 1720, Fort Worth, Tex.

LEASES—PRODUCTION

RIGHT IN THE TREND—
BREWSTER COUNTY
FIVE YEAR PAID UP OIL AND GAS LEASES
CLOSE-IN TO DRILLING WELL
I am drilling at 240 feet about 10 miles southwest of Alpine, Brewster, County, on geology approved by I. J. Broman. I offer some choice five year paid up oil and gas leases close to my well, or spreads at a low price. Write for full particulars immediately. Location looks similar to Yates Pool—right in the basin with plenty of outcroppings that can be worked geologically. Invest from $50 to $5,000 at special low price.
VAN McPHAIL,
1211 Fort Worth National Bank Bldg.,
Fort Worth, Texas.

PANHANDLE ranches, cheap, some in oil play. Box 653, Kansas City, Mo.

ROYALTIES—PRODUCTION

WHAT am I offered for ⅛ royalty in Sec. 17-6-5, Pottawatomie, County, Okla. Box B-921, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—Undivided thirty-second interest royalty. Located in West half of sec. four and east half of sec. five, twp. one South, Range five West. I. M., all located in Stephens County, Okla. Box No. 723 Phone No. 778W, Duncan, Okla.

J. F. MARION OIL COMPANY
Magnolia Building
Dallas, Texas
Buys and sells Texas Oil Leases and Royalties.

NOTICE
Offering undeveloped and producing royalties, leases and drilling blocks, Brown (Fry Field area), Coleman, Callahan and Shackelford Counties, Texas.
All offerings submitted will be accompanied by geological information.
M. ELDER & COMPANY
Coleman Hotel Bldg., Coleman, Tex.

KEVIN-SUNBURST LEASES and royalties; structures with good geological report for the drilling of a well. Ridgeway & Charles, Shelby, Mont.

LEASES and half royalties, Caddo, Blaine and other counties. Write for complete list. A. E. Baldwin, Anadarko, Okla.

ALSOBROOK & SONS
1524 Post-Dispatch Bldg.,
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We buy and sell Texas Oil leases and Royalties.

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PATENTS—Oil well cases a specialty. Reliable services by an experience practitioner devoting personal attention to each case. References to oil well clients in Tulsa. B. P. Fishburne, Patent Lawyer, 550 McGill Bldg., Washington, D. C.

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Before disclosing your invention to anyone, send for blank form.
Evidence of Conception
Bulletin "How to Establish Your Rights" and complete information free.
LANCASTER & ALLWINE
240 Ouray Bldg., Washington, D. C.

WANTED

NEWLY argonized corporation, wants blocks for drilling; ample capital. Morey Oil Co., Hotel Tulsa, Tulsa, Okla.

CAN HANDLE several drilling blocks and leases in promising West Texas counties. Write fully. Box 1020, El Paso, Tex.

WANTED—WET GAS CONTRACTS
We want wet natural gas for casinghead plant. Will start erection immediately. Give volume, gasoline content. Contract Dept., Wm. H. Allen, 1215 Detwiler Bldg., Los Angeles, California.

WANTED — Shallow or deep production from 100 bbls. to 3,000 bbls. daily. Must have reasonable amount of undeveloped acreage. Full description first letter required from owners only. Box B-870, The Oil and Gas Journal, Tulsa, Okla.

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WHY NOT YOU BUY an ideal all year round home. On top of the Ozark Mountains. 330-acres, including two miles of White River. Highly improved, and modern in every way.
Complete in every detail. Very productive. One-half in cultivation. On State Highway.
Ideal for home, club or colony. Ten-room modern house, with heat, light, baths and running water.
On State Highway, four hours' drive from Tulsa.
Cash or terms. No trade. Write Owner.
Charlie H. Clouston, Rogers, Ark.

SAN ISABEL—National Forest, near Pueblo, Colo.; one or two day scenic trips through beautiful San Isabel. Comfortable buses or 7-pass. cars. Free booklet. San Isabel Trans. Co., Pueblo, Colo.

GOODMAN'S BIRCHDALE VILLAS
A high class summer resort on Whitefish chain of lakes. Fishing, bathing, rest, recreation. Write for rates, information.
PEQUOT, MINNESOTA

FOR SALE—64 Acres very fine lake shore on Pokegama Lake, Itasca County, Minn. 1 summer resort furnished. Cottages to rent. Robert Loux, Grand Rapids, Minn.

MEDICINE LAKE LODGE
A Wisconsin resort. You want to go—don't know where to go—don't want to make a mistake when you do go. Go to Medicine Lake Lodge. Electric lights, running water, good beds, good eats, boating, bathing, fishing, dancing, hiking. Write for booklet. Rates—you'll be surprised.
J. E. DOWDEN, Three Lakes, Wisconsin

WRITE E. R. RUGGLES, PROP. of Hotel Idlewilde, Osakis, Minn., for booklet; 26 years experience in satisfying the Southern tourist. One of the founders of the Ten Thousand Lakes Association. Modern hotel and cottages. American plan. Splendid fishing. Accommodates 150 guests.

FOR SALE—The third best summer resort in the state of Minnesota. For price and terms write A. C. Robertson, Lake Park, Iowa.

THE CURTIS HOTEL,
Minneapolis, Minn.
In the heart of Minnesota's famous lake region. Largest, most distinctive hostelry in the city. Average rate single room, private bath, $2.50 the day. The ideal hotel for motor parties and tourists. Excellent cuisine.

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Hotel and Bungalows
Sayner, Wisconsin.
A modern hotel for the discriminating guest. Private baths. Excellent food. Golf, fishing, swimming, boating. S. M. Sayner, Prop.

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We are prepared to furnish from stock standard forms of gas meter Consumers' Ledgers. Sample forms and quotations on request. First-class material and workmanship.
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Oil City, Pa.

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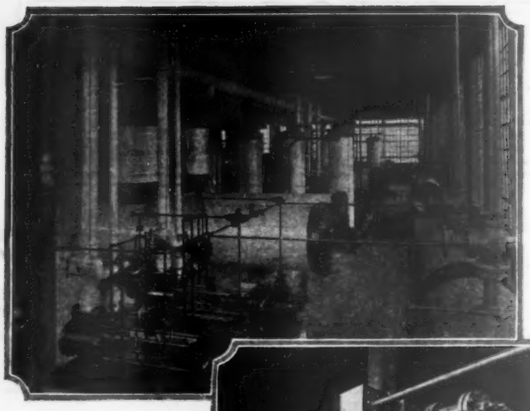

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CHICAGO REPORTS GASOLINE BUYING DUE TO WEATHER AND HOLIDAY

By J. B. Waldo

CHICAGO, July 2.—Every indication points to a joyful Fourth of July. There has been quite a bit of buying right up to the close of the week and there has been an active if not large demand for cars in transit. Another indication that motorists are preparing for tours over the Fourth is that the greasing stations were rushed to the limit practically all of the week with the peak reached on Wednesday and Thursday. Schools are closed for the summer and this permits of more touring. All that the gasoline seller wants, from refiner down to the operator of a curbstone pump, is more of the same kind of weather as was enjoyed last week by the oil man. Distributors all report a better business and in some cases the gain has been remarkable, even a doubling of gallonage over recent records being reported by some. If the weather is favorable a record will be made in the consumption of gasoline.

Refiners report that their shipments are large, some say the largest they have ever had. Others report a more moderate gain but the takings on contracts have been large and many dealers ordered their entire quantity for June and additions to the regular quotas were not infrequent. The spot demand has been more active although it does not begin to compare with the business done on contract but some of the contract owners have been in the spot market for additional cars when they could not secure immediate shipments of extra cars on their contracts or the diversion of cars already shipped. In many cases refiners' offices here, to help their customers secure prompt deliveries, have bought from other refiners or from marketers who had the gasoline in transit for early delivery. The volume of this business has been considerable, but it is widely spread over many buyers. One large refiner reported that on Wednesday he sold 20 cars in the spot market to 12 different accounts. Right at the close of the week, the trade were most interested in the possible developments after the Fourth of July. They agree that if the weather is right, as they hope and expect, there will be an enormous consumption of gasoline. Will there be a rush of buying from dealers after the holiday? Some say yes and some say maybe.

Advance Discussed

The action of several leading Oklahoma refiners in advancing their price to 7 cents, an advance of one-quarter of a cent has been a matter of great discussion in the trade and so far has tended to complicate further a very mixed situation. There is no question of the desire of the trade here, one and all, for higher prices. They believe the present price structure is not well balanced. One prominent figure in the industry said he believed prices on gasoline should go up or crude should go down. He said this might be called heresy to suggest a decline in crude but that the real trouble in the industry was too much crude and his experience had shown him that the only way to restrict production was to cut crude prices. So long as there was so much production and such an unsettled feeling as a direct result of this factor the price situation for the major products could not be called settled. Advanced prices, he contended, would be under suspicion. He pointed out that there were refiners who had been willing to sell a very fair grade of gasoline during the week at 6½ cents and that some very large companies had contracts with distributors at that price over July. The Ohio situation was also suggested as having some bearing on the prices in the Standard Oil Co. of Indiana territory. Prices being named over July or the first half of July on the basis of 6 cents Group 3. He admitted that with a greatly increased consumption, there might be a stronger market provided the demand on the refiners was sufficient to wipe up their surplus. Another Group 3 refiner said that with such large supplies of crude and almost unlimited capacity for the refining of gasoline it would be difficult to avoid flooding of the market if gasoline was advanced. Refiners who had been selling at 6½ cents, or a quarter of a cent under the market would sell at 6¾ cents and run a lot more gasoline, probably dropping back to 6½ cents as soon as they had any accumulation to move.

Refining Capacity Factors

The real threat right now to higher prices is not the large stocks on hand anywhere but in the capacity to refine, as the refiner stated above, "practically unlimited quantities of motor fuel." There has been a little selling of U. S. Motor gasoline at 7 cents but as yet the market is not more than strong at 6¾ cents. A heavy demand following the Fourth of July and a reasonable continuance of active demand for gasoline, should hold the market at 7 cents provided the refiners do not increase their runs in excess of the additional business. The marketers have bought very little gasoline for July delivery. That is, the majority of marketers have not bought because they regarded the asking price of the refiners as too high. Several have stated they would not contract for any quantity at a higher price than 6½ cents. There has been practically none offered at that price. A little was to be had at 6⅝ cents but this is gone and the marketer, if he wants to buy, has his choice of paying 6¾ cents or more. Several very good oil men have predicted there would be plenty of U. S. Motor gasoline available at 6½ cents "after July 4th." The wish might be father to the thought.

Higher Tests

There has been very little call for the higher tests and prices are practically unchanged with the 60-62 400 selling to the dealers at 7 cents and the 375 end point at 7¼ cents. The Texas refiners are booking the bulk of the export business, which is not large right now. Exporters are said to be in touch with the market but buying only limited quantities. Natural gasoline is easy in tone and the demand here is limited to occasional cars. There is considerable difference in opinion regarding the anti-knock fuels and there seems to be some letting down in the demand. Some of the distributors say their patrons claim they are not getting as good mileage but they do get a quicker start and that is what the average motorist wants. One bus company, at least, has reported adversely on the use of a well known make claiming that for their use the 58-60 437 end point was not equalled.

Even refinery experts differ and a well-known member of the fraternity said while in the city this week that in his opinion the refiners had made a mistake when they substituted the 60-62 400 end-point for the U. S. Motor grade. The producers of these special grades are equally positive in their claims for the merit of their product and produce a strong list of testimonials regarding the results secured by the use of their improved gasoline. The public is rather easily influenced in favor of something new and claimed to be better and the average motorist is not often in a position to make an accurate judgment on the merits of two makes of gasoline which really differ but slightly when put to the most careful tests. Possibly the best test of the relative merits of two motor fuels would be that of use in buses over the same route for a month. They make the same distance each day over the same roads and will average about the same number of stops. The drivers are usually the same.

Kerosene has been quite steady and

(Continued on Page 123)

PRICES SEEM HOLDING BETTER IN EASTERN GASOLINE MARKET

By N. O. Fanning
New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, July 1.—With the arrival of summer, oil refiners, jobbers and marketers report a considerable improvement in the demand for gasoline and lubricating oils, which is having a stimulating effect on conditions in general. Prices seem to be holding better. Refiners are getting 9 cents a gallon for United States Motor gasoline in all instances, and some are considering advancing the refinery price to 9¼ cents next week.

One of the features of the market is expected to be the carrying out of a big city bus plan in New York. Considerable competition is expected over the fuel contract, which should run into millions of gallons yearly.

California gasoline continues to be an important factor in the Atlantic Coast situation, as well as gasoline refined from California crude oil. Receipts of California oil in June were double those of May, and shipments are continuing now at the peak. The ability of the Atlantic Seaboard market to absorb oil from all sections is one of the outstanding features of the present situation. Certainly it is a good omen, with the season of heavy consumption just beginning.

The retail situation in the gasoline market is also somewhat improved. To all appearances, the large number of stations now doing business should constitute somewhat of a menace, yet there has been a surprisingly small amount of price cutting in view of it. If anything the tendency on the part of many stations with the coming of the summer has been to raise retail prices 1 or 2 cents, and the consumer is paying the extra price without a murmur.

With the margin between tank wagon and retail prices now running 6 and 7 cents a gallon, it seems plausible that the refiner is going to ultimately get his share of the increase if the latter can be maintained.

Consumers in New Jersey beginning today must add 2 cents a gallon to their gasoline bill as a result of the tax lexied in the state. The effect of this tax is to raise the published tank wagon quotation in the state to 18 cents a gallon, which compares with 19 cents across the river in New York State, where there is no gasoline tax.

Kerosene Unchanged

The market for kerosene is fairly active. Prices are unchanged. Some relief is reported in some sections from overcompetition, as a result of smaller imports, particularly at Baltimore, where quotations have been unusually low for several months.

Gas and Fuel Oil

California fuel oil and gas oil are dominating the eastern situation at present. With arrivals exceeding 50,000 bbls. a day and freight rates tending downward, some marketers anticipate lower prices in the near future, providing there is no unexpected event such as a sudden decline in Seminole production, which, it is believed, would increase the demand for fuel and gas oils for cracking.

Meanwhile, quotations are holding at 5½ cents a gallon for 28 plus gas oil in tank cars at refinery, $2.20 a barrel for Diesel oil to the marine trade, and $1.65 for bunker oil. On both Diesel oil and bunker fuel oil there is a lighterage charge amounting to 6½ cents a barrel extra.

Lubricating Oil

Lubricating oil prices are steady and the demand is improving in some directions. There are some exceptions, particularly with regard to oils for special industrial purposes, in lines which are now unusually dull. This is largely seasonal, however. Spindle oils, for instance, are suffering. Some grades of red and pale paraffin are also quiet, but prices are holding unusually well in spite of this.

Paraffin Wax

The wax market is suffering partly from a seasonal dullness and partly from continued low exports. Recent attempts to revive the situation were apparently not based on economically sound considerations, and appear to have largely failed. Only by developing new markets and restricting production further can the situation be definitely righted, in the opinion of many familiar with conditions in the wax market.

Petrolatum

The petrolatum market is dull. Prices are unchanged. Some concessions are said to have been made in dark green, with unconfirmed sales around 1⅝ cents a pound, for small quantities.

The Export Market

Little change can be recorded in the export situation. The movement in all departments is usually light, aside from some good case oil buying on the part of Australia and Brazil. The bulk market here seems almost at a standstill. This may be due in part to the unusually low prices obtainable at the Gulf, according to reports received here. There is little or no independent buying here.

Although the wax movement during the past week was fairly good, it is yet too early to say that there is any permanent improvement. Shipments for the week ended June 29 were over 2,500,000 pounds including 1,844,920 pounds of refined and 712,025 pounds of crude. Italy was a large taker of the refined wax.

The following table shows principal exports of petroleum and petroleum products from New York during the last three weeks (all figures in gallons unless otherwise noted):

	Week Ended		
Gasoline—	June 29	June 22	June 15
Bulk	.....	3,195,600	.....
Cases	623,000	306,090	763,950
Kerosene—			
Bulk	.....	3,437,590	.....
Cases	1,563,050	516,740	2,768,500
Lubricating oil—			
Bbls.	1,333,350	1,202,100	644,300
Cases	189,700	130,270	179,400
Lubricating grease—			
Bbls.	153,400	356,850	1,257,750
Paraffin wax—			
Bags (lbs.)	1,844,920	418,000	330,000
Bbls. (lbs.)	712,025	686,000	.....
Petroleum asphalt—			
Bbls. (tons)	267	1,411	575

The foregoing figures include all shipments of 500 bbls., 1,000 cases, or more.

The Tanker Market

The tanker charter market during the week was active, with rates tending downward.

Oil Receipts

Receipts of crude and refined oil at Atlantic Coast ports during the week ended June 29 are estimated at 4,478,000 bbls., a daily average of 640,000 bbls., as compared with 4,218,000 bbls., or 603,000 bbls. a day, for the week ended June 22.

Heavy receipts from Port Arthur and Houston districts swelled the total from the Gulf Coast for the week ended June 29 to 3,129,000 bbls., a daily average of 447,000 bbls. Imports continued rather large, amounting to 122,000 bbls. daily, about equally divided between Mexico and South America.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended		
	June 29	June 22	June 15
Gulf Coast	447,000	346,000	358,000
Pacific Coast	71,000	157,000	67,000
Mexico	59,000	81,000	51,000
South America	63,000	19,000	33,000
Total	640,000	603,000	509,000

Daily Averages by Months

1927	Gulf	Pacific	Mex.	S. Am.	Total
June	378,000	118,000	68,000	47,000	611,000
May	332,000	58,000	91,000	53,000	534,000
April	388,000	93,000	69,000	61,000	611,000
March	345,000	102,000	36,000	81,000	565,000
Feb.	379,000	89,000	40,000	48,000	556,000
Jan.	362,000	73,000	49,000	61,000	545,000
1926—					
Dec.	363,000	57,000	49,000	61,000	530,000
Nov.	335,000	62,000	56,000	40,000	493,000
Oct.	270,000	71,000	61,000	43,000	445,000
Sept.	299,000	98,000	63,000	58,000	518,000
Aug.	320,000	61,000	71,000	46,000	498,000
July	360,000	66,000	115,000	36,000	577,000

The foregoing figures are based on the carrying capacity of incoming oil-laden tankers.

Do you know that *real* Tank Protection costs little if any more than haphazard protection? For example a 6" Oceco Gauge and Thief Hatch costs only $14.40 (and even less in quantities). It is spark-proof, self-closing, gas-tight, contains no liquid seals or gaskets and is made of the right materials and best workmanship throughout. Write for new complete catalog. The Oil Conservation Engineering Co., 877 Addison Rd., Cleveland, O.

Progress in Gasoline Manufacture

Industry Rapidly Applying Developed Laws in the Various Phases of Natural Gasoline Plant Operation

By I. B. Funk
Consulting Engineer, Los Angeles, Calif.

The theoretical principles underlying the operation of natural gasoline plants though very simple, are often not understood and are neglected in actual practice. It is well known that laws developed for ideal gases and solutions can almost unreservedly be applied to this branch of the petroleum industry. On account of the complex mixtures of the hydrocarbons contained in natural gasoline some have been inclined to overlook the laws developed. If, however, a complete analysis of the gas and natural gasoline is made, it will be found that these laws can be applied to every phase of absorption plant operations.

The author has had many opportunities to observe and verify their validity in actual plant practice. At times it appeared this was not true. On further investigation it was always found the seeming difference was caused by an unknown factor. Further research determining the unknown factor would clear the problem and it would be found that the developed laws applied to the case at hand.

The lack of complete information on the composition of natural gas and the gasoline produced therefrom has been the stumbling block for many an investigator. The recent movement of several California companies and one testing laboratory in installing equipment for the anlaysis of natural gas and gasoline will go a long way in clearing up a number of seeming inconsistencies. It will show why one gas of a given gasoline content is more easily stripped of its gasoline content than another gas of the same gasoline content; why a much greater oil saturation may be run in one plant than in another; why the lean oil in one plant requires a lower gasoline content than in another for denuding the gas to the same point.

There will be many applications made in the use of gas analysis. They will show how near the developed laws apply. Apparent inconsistencies will be wiped out.

Importance of Vapor Pressure

Vapor pressure is one of the most important factors in the operation of a natural gasoline absorption plant. It applies to the absorption of the gasoline from the gas, the distillation of the gasoline from the oil, the condition of the denuded oil, the quality of the gasoline produced and to the product when stabilized.

Vapor pressure applied to the absorption of gasoline from the gas, determines the saturation of the absorption oil. The saturation naturally varies with the quality of the oil used. However, the quantity of the different components absorbed from the gas determines the vapor pressure or the extent to which the oil may be saturated. Absorption plants are ordinarily built to run at some definite saturation of the oil regardless of the composition of the gasoline to be absorbed. An analysis of the gas would determine more nearly the vapor pressure of mixtures thus determining the saturation that could be economically obtained. If this method were used it would be found that saturating the oil in one case 2 per cent the vapor pressure would be as high as in another case where the oil was saturated 6 per cent.

High vapor pressure may be caused by light fractions in different proportions in the finished gasoline. In one case there may be an excess of gas in solution, or a material that is of no value, in another an excess of butane, a material that is of value. An anlysis will show the components of the gasoline and how the product should be handled.

Denuded Oil

Vapor pressure tests applied to a denuded oil show entirely different results from the ordinary distillations run on lean oil to determine the condition of the oil. An oil showing a high vapor pressure may show less gasoline by distillation, than an oil of a lower vapor pressure, this being due to the composition of the gasoline in the oil. In the first instance there may be a small amount of low boiling compounds left in the oil, while in the second case there may be a much greater amount of high boiling components of the gasoline left in the oil. When distilling the oil and running to the same temperature the first oil described will show only a small amount of material distilled over, and the second described oil a much greater amount. Here again is shown the value of a better system for determining the condition of the absorption oil by making use of the law of vapor pressure. The vapor pressure test for locating leaks in interchangers is the only test of value for locating small leaks.

Investigations have been carried on for several years on absorbers for gasoline plants. At the present time this piece of equipment is one of the most highly developed pieces of equipment in the modern absorption plant. At first little attention was paid to obtaining equilibrium conditions. However, physical tests were worked out on one absorber to such a degree that 90 per cent of the theoretical equilibrium conditions were obtained. Calculations show that theoretically the absorber would obtain 100 per cent equilibrium, but the 90 per cent obtained in practice is all that can be expected. Here again it is pointed out that developed laws apply.

Until recently very little attention has been given to the distillation equipment. Within the past two or three years a number of improvements have been made in distillation equipment. At the present time the old dephlegmator or knockout is being substituted for the more efficient fractionating column. At the same time improvements have been made in the strippers so that at the present time practically every still is of the vertical type. All of these improvements are for the purpose of increasing efficiency. The more advanced types permit the use of very light absorption oils. This could not be done with the older type of equipment as the oil would be carried over in the gasoline. The use of light absorption oil has been advocated by some for several years and has been used to a certain extent, but the losses were great and in some instances prohibitive. Its value as an absorbent medium enables the use of this light oil without material losses and has proven the theory that the nearer the quality of the absorption oil is to the quality of the gasoline to be absorbed, the higher the efficiency obtained. Thus again one of the developed laws is borne out in practice.

Many difficulties have beset the investigator of natural gasoline extraction in years gone by. Compression gasoline with its gas in solution; gasoline from high pressure absorption plants; gasoline from gases of high gasoline content and carrying a large percentage of propane. He was held down to empirical tests and practices pertaining to straightrun refinery gasoline. The distillation method with the condenser and receiver at room temperature; the vapor pressure test method (a method only adaptable to material below 10 pounds vapor pressure) and the low gravity specification for the product. Why? Because the components of the material with which they were dealing were not known. Empirical test methods were being applied to a material with a much lower boiling range than the material ordinarily handled. Not until more improved methods were used could the investigator go very far. Improved methods were put into use and more accurate determinations were made. Each improvement in test methods led to another step. Finally the analysis of the gasoline itself. Then the investigator found he was able to determine quite definitely the amount of finished gasoline that was of value.

Improving Quality

This led to another step—the producing of a gasoline with the undesirable components eliminated. This product may be handled without excessive losses and still retain practically all the desirable elements. In stabilizing gasoline the old and well-known laws and processes of fractionating gases apply.

Various empirical tests have been used to determine the gasoline content of gas, all of which were steps in the right direction. Now, the charcoal test and CO_2 freezing test are probably most prominent in use. However, the test showing the analysis of the gas is rapidly coming into use. When the gas analysis test is adopted as the measure of the quantity of commercial gasoline in the gas, more efficient gasoline plants will be built, and at that time the engineer will be supplied with information pertaining to the most important factor for making his calculations.

In conclusion, it may safely be said that the well-known laws developed for ideal gases and solution apply to absorption plants, and if there is any difficulty in applying these laws it is because sufficient research or test work has not been done to clear up the apparent inconsistencies. More work should be done along the line of analysis of the gas, gasoline and absorbent oils.

It is not the writer's contention that it is possible to apply these laws with the present knowledge at hand, but with more intelligent research in the way of complete analysis of the materials, not on empirical tests, it will be found the laws developed will be of such use that calculations may be readily made and the results accurately predicted, thus eliminating to a great extent the experimental factor in plant designs and operation.

AIR-GAS LIFT DISCUSSION WILL FEATURE A. I. M. E. FALL PROGRAM

The fall meeting of the petroleum division of the American Institute of Mining and Metallurgical Engineers will be held in Fort Worth on October 19 and 20. The Texas Hotel will be headquarters for this meeting, the technical sessions being held in the ballroom of the hotel. During the evening of the nineteenth a smoker will be held at the Fort Worth Club.

In working out the program for this meeting, Mr. Umpleby, vice chairman for production engineering, considered it especially desirable to offer as complete a discussion as possible of the subject of air-gas lift, its theory and practice, and its relationship to gas-oil ratios. The entire first day will be devoted to sessions on this subject. One session of the second day will be devoted to the use of electricity in oil field operations and the second session to the handling of congealing oils and paraffin. In addition to this program there will be one or more sessions on petroleum engineering research.

This meeting of the petroleum division is primarily on the subject of production engineering, as seen from the program. During one of the sessions, however, a brief review with forecasts of the production situation will be presented. The program follows:

FIRST SESSION

Air-Gas Lift

Principles Underlying the Air-Gas Lift, by J. O. Lewis.
Effect of Gas Lift on Physical Properties of Oil, to be arranged.
Handling Recirculated Gas, by R. D. Gibbs.
Mechanical Installations for Air-Gas Lift.
(1) Texas other than the Gulf Coast, by E. O. Bennett.
(2) Gulf Coast, by L. L. Brundred.
(3) Oklahoma and Kansas other than Seminole, by R. W. Bond.
(4) Seminole, by C. R. Swartz.
(5) California Practice, H. C. Miller.

SECOND SESSION

Air-Gas Lift and Gas-Oil Ratios

Air-Gas Lift Practice in Seminole, by S. F. Shaw.
Air-Gas Lift Practice in California, by Jones and Laughlin.
Summary of Existing Information on Gas-Oil Ratios, Lester C. Uren.
The Relation of Air-Gas Lift to Gas-Oil Ratios and the Bearing on Ultimate Production.
(1) Data from Mid-Continent, by E. O. Bennett.
(2) Data from California, by F. W. Lake.

THIRD SESSION

Use of Electricity in Oil Field Operations

The Use of Electricity in the Mid-Continent, by D. L. Johnson.
The Use of Electricity in California, to be arranged.
The Use of Electricity in Wyoming, A. W. Peake and F. O. Prior.
The Relative Advantages and Cost of Electric Power in Lease Operation.
(1) Where Electric Current Is Available, to be arranged.
(2) Where Electric Current Must Be Generated Locally, by Ward Bladget.

FOURTH SESSION

Handling Congealing Oils and Paraffin

Summary of Existing Information, by C. E. Reistle.
Problems and Their Solution in the Appalachian Field, by Frank Brewster.
Problems and Their Solution in the Wyoming Field, by F. E. Ward.
Problems and Their Solution at Amarillo, by W. V. Vietti.

NEW GULF PUMP PLANT

PALESTINE, Tex., July 2.—The Gulf Pipe Line Co. is installing its second large pumping unit at Elkhart, 10 miles south, to handle the oil which passes through Anderson County on its way to tidewater through two great pipe lines, the second of which is now being laid through this county. The first pipe line was laid two years ago, and the second now being laid is larger than the first, and necessitated the doubling of the power pumps at Elkhart.

INCOME TAX RULING

Royalties expected to be received from an oil lease may not be reduced to their present worth as at the date of the lease, according to a ruling rendered by the Bureau of Internal Revenue, I. T. 2,361, construing the depletion provisions of the 1918, 1921, 1924 and 1926 Revenue Acts.

GASOLINE BUYING IS DUE TO WEATHER

(Continued from Page 120)

active in a routine way. There has been a little more demand and the market is, if anything, a little more firmly held than a week ago. Some refiners have advanced the price of the 42-44 for resale and it is stated to be less freely offered. There is a plenty of the 41-43. It is moving steadily from the refiners and no special offerings are being made. The market for the 41-43 is now 4⅛ to 4¼ with some refiners holding for 4⅜ cents. There is little shopping around and the tendency is to buy the kerosene with the gasoline.

Distillates Unchanged

Distillates have not changed materially in their position in this market. There are plenty of inquiries for contracts with only a few closed and most of these are of the kind that stipulates "the market" as the price with a maximum and a minimum. Several large dealers were ready to place their orders, they stated, but they wanted to buy at close to the present market over the season. Some of the local distributors have expressed their intention of letting the refiner carry the stock this season. It is rather early yet and the distributors are generally more busy in lining up customers than in making contracts for supplies of distillate. They look for a larger demand, how much larger is a matter regarding which they can only guess.

The whole oil burner industry is too new for there to be any reliable averages extending over a period of years. There is no industrial demand for distillates to make up the backbone of the consumption as in the case of fuel oil. The spot demand has been for occasional cars for the most part and the number of sizeable, no really large orders, has been few. Some of the refiners report that they have made contracts with their customers for large totals but these contracts have been at the same prices as recently mentioned. The present market is 3 to 3½ cents according to flash, color and gravity. The prices quoted for seasonable supplies range from 4 to 5 cents, again according to the desirable quality of the product. Some of the larger refiners state that they will announce their prices next week or early in July. The samples shown of the 1927 product indicate a measure of standardization in the color, flash and endpoint as there is much less difference between the products of the different refiners than was noticeable last year. Many of the samples now have a flash of 175 degrees or better while several are as low as 165 or better and actual tests obtain a flash point of 155 degrees. The low flash is particularly desirable in the early fall and late spring months when the burner is operated for brief periods and the fire box cools off to approximately the temperature of the house or less than 100 degrees.

Gas Oil Firm

The gas oil market remains very firm for the cracked straw gas oil and quite a spread is developed for the zero, straw oils compared with even the dark, zero oil. This is partly the result of former prejudice in favor of the straw oils as cleaner and more sweet and partly because of the substitution of gas oil for distillate and the light color makes it more acceptable to the customer and more desirable for that reason for the dealer. One prominent refiner has contracted with the Detroit Fuel Oil Corp., for the refiner's entire surplus of gas oil over the winter and some of the larger distributors are making arrangements for all, or part, of their anticipated needs, but there are many who are still waiting before signing up for the season.

The present outlook they claim is that prices will be some lower than last year and they are passing the lower prices on to their customers. The Standard Oil Co., has made no official change in its prices to Chicago consumers of furnace oil but dealers report that at some points they have met the lower price made on similar products by other distributors. Their sole product for domestic oil burners is a distillate previously described.

The supply of the light zero gas oils is at present limited by the demand for the product from the South which will continue for 30 or possibly 60 days longer if the season is a late one. The dark gas oil from the cracking stills and the straightrun gas oils have been purchased at 2⅝ cents but the last reported refinery price was 2¾ cents and dealers are asking the trade 2⅞ cents for the dark and the U. G. I. gas oil and some are naming a price of 3½ cents to dealers for the straw zero oil. The industrial demand is fair and there is the usual routine buying by those gas companies who do not carry stocks for a period. The larger companies are drawing on storage but will buy when the price is low enough to attract them. They had pegged the price at 2½ cents but occasionally have paid 2⅝ cents and add their purchases to their stocks on hand. If they cannot buy at these prices they draw against supplies as stated. Stocks of gas oil are stated to be large in the field but refiners prefer to hold them at present.

Fuel Oil

Fuel oil conditions are much the same as last week. Here and there a refiner has been willing to sell at a little lower price but usually only a limited quantity at that price. Some good 18-22 fuel oil was sold at 85 cents over July but the refiner stated that he needed a tank to store gasoline as the reason for making this price. Another came out more openly and quoted the same price without any reason for his act and there have been some offers of a few cars at 87½ cents. As a rule however there have been no offerings at a reduction and those that have been made have found ready buyers. The present facts in the market bear out the recent statement that there is a buyer ready to take over any reasonable quantity of refinery fuel oil at a price of 85 cents or a little less.

Reports of stocks are that they have shown a considerable increase the country over since May 1, but there has been little offered from any of the refining centers most accessible to the users of fuel oil in this territory and the statement is made that supplies are not burdensome with these refiners. What offers have been made or desirable purchases for that matter have been in the heavier oils and the gravities above 24-26 are firmly held, due in some measure to the approach of the time when the tank wagon distributors of furnace and industrial fuels will begin to prepare more largely for the coming winter. One inquiry was in the market for 28-30 zero fuel oil at a price of $1.40 and several sources of supply were unwilling to take it on over the winter at that price.

Inquiries for Contracts

There have been a good many inquiries for contracts from all sources during the past week, the list including industrial concerns, some transportation companies and the fuel oil dealers but they are slow to close arguing they must have a lower price than they have been offered. A contract at "the market" with a maximum of $1 would strike some of these as a favorable contract, one that they would consider although they would be very likely to turn round and ask for some further concession. One buyer who is holding out for such a contract says he has offers with a maximum of $1.10 and expects to buy at something less as the bidders for his business have already made substantial reductions in their first quotations. All these large buyers are intimately acquainted with the crude situation and freely state that crude will have to be reduced very soon. This is their viewpoint and they are making the most of it in their talk to sellers.

One large middlewest refinery that sells at its price to any responsible buyer of quantities, be they marketer, jobber or large consumer, has a list of prices ranging from 90 cents for its 15-18 oil, 95 cents for its 24-26 and $1 for the 26-28 gravity and these are about the general range of prices. The trouble is that the same price is being very generally made to consumers as well as those who buy for resale. Quite a number of concerns have changed from Smackover to refinery fuel oil and others will do so in spite of the real advantage in their operations from the use of the Smackover oil, for the latter product is holding firm at $1.10 and up. There are some manufacturers who were attracted to the Smackover fuel oil by the low price who still continue to use it when the price is so much higher than the refinery oil. Its lubricating values are now recognized. Some of the local oil men were surprised when first told that Smackover crude was being used in the refining of lubricating oils partly because of its low cold test. The demand for this purpose will of course never be very large as compared with the demand for fuel or for cracking stock but with a limited production every demand helps maintain the price. Few oil men care to hazard a guess as to the possible low or high point of fuel oils but some have stated that they believed that 80 cents might be reached during the summer months if no increase in the demand came to help the movement but this is the lowest price that has been named and that of course for the heavy oils which are generally held today at 90 cents.

Lubs Quiet

Lubricating oils are quiet although the improved demand for gasoline is accompanied to some extent by a large business in motor oils. Prices are unchanged, that is the price lists, but there are many concessions made and even the consumer is becoming accustomed to cuts in price and schemes whereby he is able to secure a can of motor oil apparently free of cost. Several garages carry signs stating they will meet the price made any customer by any other seller of some of the well known, advertised brands. This is one of the disadvantages of a widely advertised brand, as the price is generally known to motorists and they know when the price is cut. Some dealers give out punch tickets and when 75 gallons of gasoline have been purchased the buyer is given a can of motor oil. There are many motorists who insist on having certain brands of oil but others are attracted by the gift scheme. The industrial demand is stated to be rather good right now and refiners mention good export shipments but there is little new export business being done here.

Tank Wagon Holds

There has been no general change over this territory in the tank wagon scale and none is at present looked for. The gallonage is increasing with the spell of real gasoline weather and this makes the dealers feel some better although they have many complaints to make regarding profits. Nearly every distributor reports a larger business for June than for the corresponding month of last year, the larger organizations calling their increase around 15 per cent while some of the smaller state that their sales increased 30 per cent and even more. Of course the smaller dealers register the extremes of increases while the larger companies more clearly indicate the real average growth of the gasoline consumption.

There has been considerable improvement in the retail price situation. In Minnesota meetings of all dealers have been held and the situation very greatly improved if not made normal at every point. Something the same is going on in other parts of the territory where there has been considerable price cutting. There are still some sections where profits must be entirely dependent on the sales of other products than gasoline. The distribution of kerosene over June was greatly in excess of the business done in that product last year. There is some complaint of collections due for the most part to the situation in some of the farming sections and in part to the low prices at which gasoline has and is being sold by dealers in their price wars.

Tracing Bootleg Gasoline

The origin of the so-called "bootleg" gasoline was tested last week in this city. There are certain sections where gasoline is sold by practically all stations at the tank wagon price or 14 cents. The motorist, an oil man, would drive into a station and intimate his desire for a fill if the gasoline was good stuff, not otherwise. In each case the attendant named the refiner of the gasoline and the grade of gasoline sold. The list is adorned by the names of the superior product of some of the best-known refiners in Oklahoma, and elsewhere. The gasoline could not be laid down in Chicago at less than 9 cents which would figure 6½ cents Group 3 and 2½ cents for freight, local inspection included. The result is a 5 cent spread. On one of the thoroughfares where the 14 cent sign is very prominently in evidence one distributor only has a siding. He can take in car lots direct from tank car to storage and does run the gasoline from his bulk plant on the siding to his underground tanks for his pumps. But there are a dozen or more right along in a short distance who have no bulk plant and are filled daily from the trucks of their source of supply. There are several questions that could be asked as to how they do it. The replies would prove conclusively that these dealers could not do it. But they do and keep right on. One explanation is that our available figures on which we rely for costs of distribution are those of large organizations with elaborate accounting departments and systems. One prominent oil man says it costs the Standard 6¼ cents to sell its gasoline. He knows that this is so for he read it in a book. There are lots of distributors who can market gasoline for 4 cents. They keep few books, have no system but they do know how to "Look up, work hard and smile."

CALIFORNIA GASOLINE ADVANCED ONE CENT

LOS ANGELES, Calif., July 2.—The Standard Oil Co. of California announced that effective July 1, the price of Red Crown gasoline at its service stations would be increased 1 cent per gallon. The other large marketing companies have fallen in line and gasoline is now selling at San Francisco for 20 cents, including state tax, and at Los Angeles for 19½ cents, including tax. The last price advance came as quite a surprise to the industry. The explanation given is that in spite of present heavy production, consumption continues even greater due to the increased summer demand and that the condition is such as to warrant a price increase. The smaller independent refiners have not yet announced their policies but it is understood they will decide to advance their price 1 cent. Engine distillate has followed gasoline and in almost every case enjoys a full cent increase.

California gasoline export to the Atlantic Seaboard and foreign ports has also shown an improvement in price. Inquiries from the East are becoming more numerous and offers actually made are at better prices than for some time. One factor which vitally affects this condition is the decrease in tanker prices from Los Angeles to the Atlantic Seaboard.

Kerosene did not follow the price increases enjoyed by motor gasoline and engine distillate. Kerosene has been moving in large volume from Los Angeles harbor to the South China market where competition has been so keen the Standard Oil Co. of New York recently reduced prices on cased kerosene at Shanghai $1 Mex., equivalent to 47 cents United States. This is a decrease of just under a half cent per gallon and will be seriously felt by smaller California refiners in this trade. In spite of the decided weakening in the Shanghai market, California prices remain firm at present levels.

Figures just released by the Bureau of Mines covering California operations for May show there was a great improvement in the demand for natural gasoline. Consumption increased 43,724 bbls. over April and was only 69 bbls. per day less than daily production in May. Production of natural gasoline on the other hand showed a decline averaging 912 bbls. per day. Production, however, continued at a high rate with reasonable indications there will be no drastic decline in the next few months. The natural gasoline market did not reflect the price advance in motor gasoline, remaining practically unchanged.

REFINING AND MARKETING

SIGNAL GASOLINE CO. OPENS TULSA OFFICE

Effective July 1, Ray R. Rosier opened a Mid-Continent sales office for the Signal Gasoline Co. with offices in the Exchange National Bank Building, Tulsa,

Ray R. Rosier

Okla. On the same date, Mr. Rosier resigned as sales manager of the Akin Gasoline Co., with which he has been associated for the past three years.

Mr. Rosier has been engaged in the sale of natural gasoline and refined products for a number of years. Previous to his connection with the Akin company he was sales manager of the Western Oil Corp. In his new position, Mr. Rosier will handle the sales of three natural gasoline plants of the Signal company in the Mid-Continent Field. The Signal company is a California company with general offices in Los Angeles. The company also is a large producer of natural gasoline on the West Coast.

SKELLY CO. CONTRACT FOR RESIDUE PRODUCT

The Skelly Oil Co. has closed a contract with Godfrey L. Cabot, Inc., providing for the sale of $1,500,000 worth of natural gas to the latter company over a period of 10 years. The gas will be the residue product secured by the Skelly company in the operation of its natural gasoline plants in the Panhandle Field of Texas.

The residue gas will be used by the Cabot company in the manufacture of carbon black. The company has started construction work on the plant which is located near the town of Skelly in Carson County. The Texas Railroad Commission has issued a permit to the company allowing it to use 50,000,000 feet of gas daily in the manufacture of carbon black. The new plant will incorporate some new methods of manufacture recently perfected by the company.

WILL CONTINUE IN OIL BUSINESS

SPRINGFIELD, Ill., July 2.—Harry Renfro, president of the Tulsa Oil Co., of this city, who recently sold the service stations of the Tulsa company, to the Sweeney Gasoline & Oil Co., of Peoria, announces that the Tulsa Oil Co. will continue in business doing a jobbing business chiefly with commercial accounts. The purchase of the Sweeney organization included property, inventories and accounts. The stations are now being operated under the name of the Sweeney Gasoline & Oil Co.

NATURAL GASOLINE OPERATORS INVITED TO LOS ANGELES

An invitation to hold a joint meeting at Los Angeles has been extended to the Association of Natural Gasoline Manufacturers by the California Natural Gasoline Association. The invitation to hold a two-day meeting was extended by George L. Ratcliffe, recently elected president of the California association. Mr. Ratcliffe also is a vice president of the Association of Natural Gasoline Manufacturers.

The board of directors of the latter association will probably decide the latter part of this week whether or not it will be possible to accept the California invitation. If accepted, each association will furnish the program for one day.

NEW PLAN FOR SELLING OIL TRIED IN CHICAGO

CHICAGO, July 2.—A new plan for vending motor oils is being put into effect in this city. The plan, it is stated by the Chicago Motor Oil Co. which is back of the idea, is not new, having been introduced successfully in Detroit and elsewhere.

According to this plan the company sells to any investor one pump and tank and 125 gallons of its "Excello motor oil" for the sum of $200 cash. It gives the buyer a bill of sale. The limit is five pumps and a supply of oil to one buyer. The company then enters into a contract for five years to place the pump and the supply of oil in some place where oil is sold. This is done on consignment and usually in a garage. The company also agrees to service the installation, refilling the tank and collecting for the oil actually sold by the consignee at regular intervals. The profit on the sale of the oil is pooled and divided among all the pump owners in the State of Illinois in which the company is licensed to operate.

The grade of oil is guaranteed to be 100 per cent pure Pennsylvania grade motor oil and is supplied by a well-known refining organization and bears the license number supplied to the refiner by the Pennsylvania Grade Crude Oil Association. A detail of the service is that the tank has a special lock which can only be opened by the regular representative of the company which prevents, it is claimed, any substitution of an inferior product.

The company is bonded for the faithful performance of its duty by one of the largest surety companies in the United States and a local bank of highest standing is given as reference for the officers of the company. The statement of profits claim that the average sales in other cities where the plan has been in operation for over a year are between three and four gallons daily per pump and that on the basis of three gallons daily the profit to the owner of the outfit would be 32.8 per cent annually on the investment of $200. All details seem to be carefully worked out, according to the literature of the company, and includes the insuring of the pump, and its replacement if damaged or destroyed.

RE-ENTERS JOBBING BUSINESS

CHICAGO, July 2.—John Burke, who sold out his interest in the Supreme Oil Refining Co., of Indianapolis, Ind., some time ago and was temporarily in business elsewhere, has organized the White Star Oil Co., and re-entered the jobbing business in Indianapolis with offices at 1040 North Meridian Street.

JACOBI TRANSFERRED TO MILWAUKEE OFFICE

W. P. Jacobi, who has been in charge of the Tulsa office of the Wadhams Oil Co. for the past five and a half years has been transferred to the Milwaukee

W. P. Jacobi

general offices of the company. In his new position he will have charge of the gasoline purchases of the company. In this work he succeeds the late L. E. Yundt, a vice president of the company.

Mr. Jacobi, while in Tulsa, was one of the largest purchasers of refined oils in the Mid-Continent Field, where he was well known among the refining and marketing fraternity. In his new work he expects to make frequent trips to the Mid-Continent Field.

INJUNCTION SOUGHT ON GASOLINE TAXES

CHICAGO, July 2.—The Chicago Motor Club has filed with the Sangamon County District Court, a bill asking for an injunction to prevent the collection of the 2-cent tax on gasoline under the new road tax measure, just passed by the State Legislature. The petition for an injunction asks that the collection of the gasoline tax be enjoined for the reason that the tax is unjust, unconstitutional and discriminatory.

There are nine points made in the bill asking for the injunction. A summary of the contentions follow. The bill exempts kerosene, although many vehicles are propelled by that fuel; that millions of gallons of gasoline now stored in the State are exempt from the tax because owned by persons who are not distributors in the terms of the tax measure; that the mere declaration of a legislature cannot change the character of kerosene and declare it to be a motor fuel; that the law in fact is not correctly described in that it does not put a tax on gasoline but levies on persons using the highways.

It is also contended that the law conflicts with previous enactments in that the fees charged for licenses and regulations are designed to raise money for roads and that the gasoline tax is an additional levy for the same purpose; that the gasoline tax law discriminates between importers and persons who purchase from importers; that the refunds provided for in the tax law are to be paid to persons who have not paid the tax which is collected by the companies selling gasoline who pass the tax on to the consumer; that the refund provision is so loosely drawn that it affords great opportunities for grafting.

The action of the Chicago Motor Club, it is stated, is backed by other clubs and organizations who have been active in opposing the passage of the measure placing a tax on gasoline used in the propulsion of motor vehicles.

AMERICAN GASOLINE REDUCED IN SUMATRA

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 2.—Competition in American gasoline is said to have brought about the first reduction in price in Sumatra during the past two years, according to Consul Sydney B. Redecker at Medan.

Gasoline, which formerly retailed at approximately 3 florins per nine liters (about 50 cents a gallon), now sells for 2¾ florins, a reduction amounting to about 3 cents on the gallon.

Since the introduction of American gasoline in August, 1926, there have been steady importations for the account of one very large American producing concern. Prior to August there had never been any American gasoline sold in Sumatra and the entire gasoline trade of this country was controlled by the one local Dutch company which secures its production from large wells and refineries about 75 miles from Medan, the leading city and commercial center of northern Sumatra. The production of these wells is of such an extraordinarily high volatile quality it is almost pure gasoline when it comes from the ground.

USE OF DISTILLATES IN CALIFORNIA AREA

LOS ANGELES, Calif., July 1.—The use of distillates as furnace oil in California is largely limited to small manufacturing concerns. The sale of the product is large enough to establish a definite market for the product. Climatic conditions in the southern part of the state are not favorable to the development of the furnace oil markets. However, there is no apparent reason why the market could not be developed in the northern part of the state and in Oregon and Washington at points accessible to water transportation from California refineries.

The furnace oil sold here is largely handled by jobbers who buy the material from refiners. There is no uniformity as to specifications or price.

JOINS AKIN COMPANY

A. J. Pfister, who has been connected with the sales department of the Bell Oil & Gas Co., Tulsa, Okla., for the past two years, has resigned to accept the position of sales manager of the Akin Gasoline Co., with offices in Tulsa. Mr. Pfister succeeds Ray R. Rosier, who resigned effective July 1.

ILLINOIS GASOLINE TAX

CHICAGO, July 2.—Officials of various oil companies operating in this State, officers of the Illinois Petroleum Marketers Association and Colonel English, who will be in charge of the tax collecting for the State, have been in conference to work out the details of making the collections of the gasoline tax. The desire is to avoid as much red tape as is possible. The tax is effective August 1.

SUPERVISES AGENCIES

SHREVEPORT, La., June 30.—W. H. Montgomery, district sales manager at Alexandria, La., for the Louisiana Oil Refining Corp. of Shreveport, La., has been promoted to supervisor of agencies with headquarters at Shreveport.

Brief Items for Plant Operators

To Issue Technical Paper 323-B Soon; Camp Makes Report

The Federal Specification Board will shortly publish Technical Paper 323-B, containing all the revised tests and specifications on lubricants and liquid fuels. This paper will replace and is a revision of Technical Paper 323-A. The previous revision was made March 18, 1924.

An announcement concerning the publication of Technical Paper 323-B was made at a meeting of the advisory board of the Technical Committee of Lubricants and Liquid Fuels which held sessions last week in French Lick, Ind., in connection with the annual meeting of the American Society for Testing Materials. A report of the annual meeting was published in the June 30 issue of The Oil and Gas Journal (page 38). The advisory board is headed by T. G. Delbridge, of the Atlantic Refining Co., as chairman. Other members are O. P. Keeney, representing the National Petroleum Association, R. P. Anderson, of the American Petroleum Institute, and H. W. Camp, of the Western Petroleum Refiners Association.

Upon his return to Tulsa, Okla., following the French Lick, Ind., meeting, Mr. Camp made the following report to members of the Western Petroleum Refiners Association regarding the work of the advisory board and the progress being made looking to the simplification and standardization of Federal specifications:

Camp's Report

Probably it is hard for the various companies operating not only in the Mid-Continent Field but all over the United States as well, to get an over-all picture of what this committee has been trying to accomplish in acting in an advisory way to the Government board. The first question that was brought up for general discussion was regarding the publication of Technical Paper 323-B, which is to be a revision of Technical Paper 323-A, last revised on March 18, 1924. Since that date the methods of test for United States Government specifications for lubricants and liquid fuels have not been revised. During this period of three years considerable progress has been made in connection with standardization by the A. S. T. M. of methods of testing petroleum products. To point out a specific example, it is quite gratifying to note that some two or three years ago various petroleum companies operating were using as high as 10 different methods of test for viscosity which necessitated their furnishing their laboratories with equipment for taking these different methods when selling to the various states and jobbers and that now the A. S. T. M. has finally brought this down until we have practically standardized on three methods, which include the testing of viscosity of lubricating oils and fuel oil.

"Another specific example is in connection with flash. There were approxi-

(Continued on Page 136)

BUYS SAN ANTONIO REFINERY

The Southern Crude Oil Purchasing Co. has purchased the Elliot Jones & Co. refinery located at San Antonio, Tex. The company has started to dismantle the plant which has been shut down for several months. The refinery consisted of skimming and lub plants with Holmes-Manley cracking units. The Southern company also has an option on the refinery site which adjoins one of the best residential sections of San Antonio. The company has not announced its plans in regard to the final disposition of the refinery.

PECOS COUNTY, TEXAS, CRUDE HAS SUBSTANTIAL GASOLINE YIELD

As the Yates Pool in Pecos County, Texas, is held back from intensive development because of the present low prices, various oil companies are investigating the possibilities offered in this field, believing that it might some day equal other large fields and as prices adjust themselves to normal levels, much activity is expected there.

Most of the proven acreage is held by the Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co. and for that reason the production is under control, but with their wells pinched in to a small percentage of their capacity, the daily production is exceeding 9,000 bbls.

Because of the location of the field it is not possible to freight that crude into Mid-Continent in competition with production there and the logical outlet for any great volume would be south on the gulf. The Illinois Pipe Line Co. has two lines in the field now and is building a third line to run south to Comstock, where it will join the Southern Pacific Railroad. From here the line could be extended to the Gulf Coast without a great expenditure.

Representative samples of the crude have been tested in the laboratory and the results of three of these tests indicate that a plant yield as high as 30 per cent U. S. Motor could be expected from it and although it contains a high percentage of sulphur it has a very low cold test and it should not be difficult to refine with the proper care taken in treating the distillates. The crude yields a normal cut of gas oil and should be suitable charging stock for pressure stills. The sulphur content would probably run high as in the case of the crude and fuel and would tend to increase corrosion if not neutralized by treating but as similar conditions exist in cracking crudes produced in California and other south Texas fields the problem is not a new one and the same method could be carried out as in the refining of these latter crudes.

Analyses of Pecos County Crude

The following tables summarize the distillation tests made of three samples of Pecos County crudes. The tests were made in the laboratories of three refinery organizations from three different samples of crude oil.

TEST NO. 1
Yates Pool, Pecos County, Texas

Representative sample of field. Section 34½, Block 1, I. & G. N. Survey:	
A. P. I. gravity	30
Sulphur (per cent)	1.56
Water	none
B. S.	trace
Saybolt vis. @ 70°F.	94
@ 100	57
Cold test: Zero and flowing.	

	Per Cent
Gasoline (Stratford)	29.4
Gravity	53.4°
I. B. P.	126
E. P.	439
Kerosene (Stratford)	1.3
Gravity	39.7°
Gas oil	6.5
Gravity	34.8°
Wax distillate	10.9
Gravity	30.0°
Flash	240
Fire	280
Vis.	42 @ 100
C. T.	Zero and flowing
Bottoms	50.0
Gravity	18.3°
Flash	345
Fire	390
Vis.	102 @ 210
C. T.	Zero
Loss	1.9

Atmospheric Distillation—

Temp. Cut°F.	Product	A.P.I. Grav.	Per Ct. Yield
Up to 392	Gasoline	66.2°	24.66
427-527	Kerosene	38.0°	21.66

Vacuum Distillation at 40 mm.—

Up to 437	Gas oil	28.3°	6.33
437-527	Light lub. dist.	26.7°	10.20
527-572	Med. lub. dist.	24.2°	8.13

TEST NO. 2

Crude:	
Gravity	29.6°
Sulphur	1.4%
Viscosity at 100	61
Cold test	Below zero
Yields (per cent):	
Gasoline (437 E. P.)	18.0
Kerosene	11.0
Gas oil	36.0
Fuel oil (14.2 gr.-50 C. T.)	32.0
Loss	3.0

TEST NO. 3

Crude:	
Gravity	30.0°
Color	Green
B.S.	.2%
Sulphur	2.4%
Hydrogen	Very high
Pour point	10° F.
Yields (per cent):	
Gasoline (437 E. P.)	30.0
Kerosene	6.0
Gas oil	16.0
Wax distillate	21.0
Fuel (21.6 gr.)	25.5
Loss	1.5

AMONG THE TECHNICAL MEN

Among the promotions just announced by the Louisiana Oil Refining Corp. of Shreveport, La., was that of B. P. Crittendom, manager of refineries, who has been appointed assistant to the vice president. Although only with the Shreveport company since last February, Mr. Crittendom has won recognition as a plant operator which was responsible for his advancement to an executive position.

B. P. Crittendom

During the time he has been with the Louisiana Oil Refining Corp., Mr. Crittendom has had full charge of operations of the company's three plants having a total crude capacity of 25,000 bbls. daily. In his new capacity he will continue to have supervision over refinery operations although the direct management will fall to another.

Mr. Crittendom came to the Louisiana company from Everett, Mass., where he was assistant refinery manager for the Beacon Oil Co. He started at that plant in 1920 as engineer, being promoted later to assistant refinery superintendent and then to assistant refinery manager.

The Beacon Oil Co. was Mr. Crittendom's first refinery connection, but he had previously worked in various engineering and construction positions, chief of which was with the Aetna Explosives Co.

Mr. Crittendom is a graduate of the Massachusetts Institute of Technology of the class of 1914, having gone there after receiving his early schooling in his native city of Rochester, N. Y.

CONTROL FILTRATION PATENTS SUMMARIZED

Supplementing a compilation on "Contact Filtration Literature," which appeared in the June 3, 1926, issue of The Oil and Gas Journal, C. A. Miketta of the technical department of the Celite Co., Los Angeles, Calif., calls attention to certain patents not included in the first report.

"Undoubtedly one of the main reasons why the petroleum industry did not utilize finely divided clays for decolorization (as used by the vegetable oil industry for some time) was the fact that such finely divided clays retard filtration very appreciably," Mr. Miketta states. "The solution to this problem was solved by P. A. Boeck, who, in United States patent 1,272,197, issued July 9, 1918, disclosed a decolorizing material formed of a mixture of calcined, finely divided diatomaceous earth and a decolorizing material such as fuller's earth. Such composite material is capable of high decolorization because of large surface area and of high flow rate during filtration, the diatomaceous earth being a well-known filter aid.

"United States patents 1,562,001 and 1,471,201 to Prutzman and Von Bibra, and 1,561,999 to Prutzman are concerned entirely or partly with the process of mixing the clay with water to form a slurry or paste and then adding such paste to the oil to be treated. In this connection it is of interest to consider patent 1,170,868 to F. R. Bachler, issued in 1916, in which Bachler states "The mixture of colloidal clay and kieselguhr is made into a thick cream by triturating it with a little water, and the resulting cream is then added to the sugar solution to be treated." Bachler's process is not limited to sugar solutions, however, as he states that it can be used for purifying vegetable or mineral oils.

"A. H. Krieger in patent 1,212,648, issued January 16, 1917, claims a composition for purifying liquids, the composition comprising a mixture of finely divided kieselguhr and a mineral colloid such as any clay, hydrous aluminum silicate, etc. Krieger also states that the mixture may be made into a paste with water before being added to the solution to be treated."

A. I. M. E. YEAR BOOK

The American Institute of Mining and Metallurgical Engineers, Inc., has just released its year book on petroleum entitled "Petroleum Development and Technology in 1926." The book contains 73 papers and discussions presented before the petroleum division of the institute at its Tulsa, Okla., and New York meetings. The papers and discussions, covering approximately 1,000 pages, include the contribution of 240 engineers. The papers are concerned with the latest developments in production engineering, refining technology, transportation engineering, symposium on corrosion and production, petroleum economics, together with a round table discussion on petroleum engineering, educational problems and petroleum engineering research problems. The address of the publishers is 29 West Thirty-ninth Street, New York.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	July 5		June 28		June 21	
OKLAHOMA (Group 3)—						
50-52 450 endpoint (Naphtha)	.06¾	.06½	.06¼	.06⅜	.06¼	.06⅜
56-58 450 endpoint	.06½	.06⅝	.06¼	.06⅜	.06¼	.06⅜
58-60 450 endpoint	.06⅝	.06¾	.06½	.06⅝	.06⅜	.06½
58-60 437 endpoint (U. S. Motor)	.06¾	.07	.06¾		.06⅝	.06¾
60-62 400 endpoint	.07⅛		.07		.07	
64-66 375 endpoint	.07¼	.07⅜	.07⅛	.07¼	.07⅛	.07¼
68-70 360 endpoint	.07½	.07¾	.07½		.07½	
64-66 437 endpoint	.06½	.06⅝	.06¼	.06½	.06¼	.06½
KANSAS—						
58-60 437 endpoint (U. S. Motor)	.07	.07¼	.06¾	.07	.06¾	.07
NORTH TEXAS—						
56-58 437 endpoint	.06¼	.06½	.06¼	.06½	.06¼	.06½
58-60 450 endpoint	.06¼	.06⅜	.06¼	.06⅜	.06¼	.06⅜
58-60 437 endpoint (U. S. Motor)	.06⅜	.06¾	.06½	.06⅝	.06½	.06⅝
60-62 400 endpoint	.06¾	.07	.06¾	.06⅞	.06¾	.06⅞
64-66 390 endpoint	.07		.07		.07	
64-66 375 endpoint	.07	.07⅛	.07	.07⅛	.07	.07⅛
68-70 360 endpoint	.07¼	.07½	.07¼	.07½	.07¼	.07½
64-66 437 endpoint (blend)	.06½	.06¾	.06½		.06½	
NORTH LOUISIANA—						
56-58 437 end point (U. S. Motor)	.07	.07¼	.07		.06¾	.07
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.07	.07¼	.06¾	.07	.06¾	.07
PENNSYLVANIA—						
52-54 Naphtha	.07¾	.08½	.07¾	.08½	.07¾	.08½
54-56 Naphtha	.08½	.08¾	.08½	.08¾	.08½	.08¾
58-60 Gasoline	.08⅜	.08⅞	.08⅞	.09⅛	.08⅛	.09⅛
60 Gasoline	.09¼	.09½	.09¼	.09½	.09¼	.09½
62 Gasoline	.10	.10¼	.10	.10¼	.10	.10¼
64 Gasoline	.10¼	.10½	.10¼	.10½	.10¼	.10½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09½	.10½	.08	.09	.08	.09
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.06½	.06¾	.06¼	.06½	.06¼	
56-58 450 endpoint	.06⅝	.06⅞	.06½	.06⅝	.06⅜	.06½
58-60 347 endpoint (U. S. Motor)	.06¾	.07	.06¾		.06¾	
60-62 400 endpoint	.07	.07⅛	.07		.07	
64-66 375 endpoint	.07¼		.07¼		.07¼	
68-70 360 endpoint	.07½	.07¾	.07½	.07¾	.07½	.07¾
64-66 437 endpoint (blend)	.06¾		.06½		.06½	

NATURAL GASOLINE

	July 5		June 28		June 21	
OKLAHOMA (Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04½		.04½		.04½	.04¾
Grade A, 72-79.9, 375 e.p., rec. 90%	.04½		.04½		.04¾	
Grade BB, 84-92, 375 ep., rec. 85%	.04⅜		.04⅜		.04½	.04¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.04⅜		.04⅜		.04½	.04¾
Grade C, 80-90, 375 e.p., rec. 78%	.04¼	.04⅜	.04¼	.04⅜	04½	04¾
NORTH TEXAS—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04½		.04½		.04¾	
Grade A, 72-79.9, 375 e.p., rec. 90%	.04½		.04½		.04¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¼	.04⅜	.04¼	.04⅜	.04½	.04¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¼	.04⅜	.04¼	.04⅜	.04½	.04¾
Grade C, 80-90, 375 e.p., rec. 78%	.04¼		.04¼		.04½	04¼
NORTH LOUISIANA—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04½	.04¾	.04½	.04¾	.04¾	.05
Grade BB, 84-92, 375 e.p., rec. 85%	.04½	.04¾	.04½	.04¾	.04¾	.05
Grade C, 80-90, 375 e.p., rec. 78%	.04⅜	.04⅝	.04⅜	.04⅝	.04⅝	.04⅞
CALIFORNIA—						
75-85, 370, 390 endpoint	.10	.10½	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04½		.04½		.04¾	
Grade A, 72-79.9, 375 e.p., rec. 90%	.04½		.04½		.04¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.04⅜		.04⅜		.04½	.04¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.04⅜		.04⅜		.04½	.04¾
Grade C, 80-90, 375 e.p., rec. 78%	.04¼		.04¼		.04½	.04¾

BURNING OIL

	July 5		June 28		June 21	
KANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04⅜	.04½	.04⅜	.04½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04	.04¼	.04	.04¼	.04	.04¼
42-44 water white Kerosene	.04⅜	.04½	.04⅜	.04½	.04⅜	.04½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04½	.04¾	.04½	.04¾	.04⅝	.04¾
NORTH TEXAS—						
41-43 water white Kerosene	.03¾	.04	.03¾	.04	.03⅞	.04⅛
40-42 water white Kerosene	.03¾	.03⅞	.03¾		.03¾	
ARKANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04½	.04¾
PENNSYLVANIA—						
43 Kerosene prime white	.06	.06¼	.06¼	.06½	.06¼	.06½
45 Kerosene water white	.06¼	.06½	.06¼	.06½	.06⅜	.06⅝
46 Kerosene water white	.06¾	.07	.06¾	.07	.06⅞	.07⅛
47 Kerosene water white	.07	.07¼	.07	.07¼	.06¾	.07
300 Mineral Seal	.07½	.07¾	.07½	.07¾	.07½	.07¾
CALIFORNIA—						
38-40 water white (high burning test)	.05¾	.06½	.05¾	.06½	.05¾	.06½
Engine distillate, 43-45 445 endpoint	.08	.08½	.07	.07½	.07	.07½
Engine distillate, 42-44 480 endpoint	.07¾	.08	.06¾	.07	.06¾	.07
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.04⅛	.04¼	.04⅛	.04¼	.04¼	.04⅜
42-44 water white Kerosene	.04½		.04½		.04½	

FUEL OILS

	July 5		June 28		June 21	
KANSAS—						
24-26 Fuel Oil	1.00	1.05	1.00	1.05	1.00	1.05
32-36 Gas Oil	.02¾	.03	.02¾	.03	.02¾	.03
38-40 Distillate	.03½	.03⅝	.03½	.03⅝	.03½	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil	.85	.90	.85	.90	.85	.90
18-22 Fuel Oil	.90	.92½	.90	.92½	.90	.92½
22-26 Fuel Oil	.90	.92½	.90	.92½	.90	.92½
24-26 Fuel Oil	.92½	.95	.92½	.95	.90	.95
26-30 Fuel Oil	.95	.97½	.95	.97½	.95	.97½
28-30 Fuel Oil	1.00	1.05	1.00	1.05	1.00	1.05
32-36 Gas Oil (dark)	.02⅝	.02¾	.02⅝		.02⅝	
32-36 Gas Oil (straw overhead)	.02⅝	.02¾	.02⅝	.02¾	.02⅝	.02¾
36-38 Distillate	.03⅛		.03⅛		.03⅛	
38-40 Straw Distillate	.03¼		.03⅛	.03¼	.03⅛	.03¼
NORTH TEXAS—						
24-26 Fuel Oil (sellers') cars)	.90		.87½	.90	.87½	.90
32-36 Gas Oil (straw)	.02½	.02⅝	.02⅝	.02¾	.02⅝	.02¾
38-40 Straw Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
NORTH LOUISIANA—						
18-20 Fuel Oil	1.12½	1.15	1.10	1.15	1.10	1.15
32-36 Gas Oil	.03	.03¼	.03	.03⅛	.03¼	.03 /2
ARKANSAS—						
36-38 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
32-36 Gas Oil (straw)	.03¾	.03½	.03¾	.03½	.03¾	.03½
16-20 Refinery Fuel Oil	1.00	1.05	1.00	1.05	1.00	1.05
GULF COAST (South Texas)—						
Gas Oil	.04½	.04¾	.04¼	.04¾	.04¼	.04⅜
Fuel Oil	1.60	1.65	1.50	1.60	1.50	1.60
PENNSYLVANIA—						
30-34 Fuel Oil	.04¼	.04¾	.04¼	.04¾	.04¼	.04¾
36-40 Fuel Oil	.04¼	.04¾	.04¼	.04¾	.04¼	.04¾
CALIFORNIA—						
33-36 Distillate	.03¾	.04	.03¾	.04	.03¾	.04
27-32 Distillate	.03¼	.03¾	.03¼	.03¾	.03¼	.03¾
*15-20 Fuel Oil, Bunkers (at tide water)	.85	1.00	.85	1.00	.85	1.00
15-20 Fuel Oil (cargo lots)	.71	.75	.71	.75	.71	.75
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	.95		.95		.95	
22-26 Fuel Oil (sellers' cars) Group 3	.92½	.95	.92½	.95	.92½	.95
18-22 (Group 3)	.90	.92½	.90	.92½	.90	
16-20 Smackover	1.10	1.15	1.10	1.15	1.10	1.15
32-36 Gas Oil (zero)	.03	.03⅛	.03	.03⅛	.02⅞	.03¼
32-36 Gas Oil (industrial)	.02¾	.02⅞	.02¾	.02⅞	.02⅝	.02⅞
36-38 Distillate	.03⅛	.03¼	.03⅛	.03¼	.03	.03¼
38-40 Straw Distillate	.03¼	.03⅜	.03¼	.03⅜	.03¼	.03½

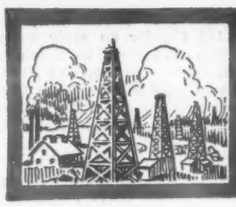
*Bunkers.

LUBRICATING OIL AND WAX

	July 5		June 28		June 21	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06½	.06¾	.06½	.06¾	.06½	.06¾
100 vis., 3 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
150 vis., 3 color, 20-25 cold test	.08½	.08¾	.08½	.08¾	.08½	.08¾
150 vis., 4 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
180 vis, 3 color, 23-28 cold test	.10	.10¼	.10	.10¼	.10	.10¼
180 vis., 4 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
180 vis., 5 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
200 vis., 3 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
200 vis, 4 color, 23-28 cold test	.10⅜	.10⅞	.10⅜	.10⅞	.10⅜	.10⅞
200 vis., 5 color, 23-28 cold test	.10½	.10¾	.10½	.10¾	.10½	.10¾
240 vis., 3 color, 25-30 cold test	.14	.14¼	.14	.14¼	.14	.14¼
240 vis., 4 color, 25-30 cold test	.13½	.13¾	.13½	.13¾	.13½	.13¾
240 vis., 5 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
280 vis., 3 color, 25-30 cold test	.15¾	.16¼	.15¾	.16¼	.15¾	.16¼
280 vis., 4 color, 25-30 cold test	.15¼	.15½	.15¼	.15½	.15¼	.15½
280 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
Cylinder Stocks:						
600, steam refined, light green	.07	.09	.07	.09	.07	.09
600, steam refined, dark green	.05	.06	.05	.06	.05	.06
190-200 vis. @ 210 Bright Stock	.31	.33	.31	.33	.31	.33
150-160 vis. @ 210 Bright Stock	.26		.26		.26	
Waxes:						
124-126 White Crude Scale Wax	.02⅜	.02½	.02⅜	.02½	.02½	.02¾
PENNSYLVANIA—						
34 Neutral	.07½	.07½	.07¼	.07½	.07¼	.07½
34 Sundebloom Neutral	.08½	.08¾	.08½	.08¾	.08½	.08¾
36 Miners' Neutral	.06¾	.07	.07	.07¼	.07	.07¼
150, 3 color	.28¼	.28½	.28¼	.28½	.28¼	.28½
180, 3 color	.32¼	.32½	.32¼	.32½	.32¼	.32½
200, 3 color	.34¼	.34½	.34¼	.34½	.34¼	.34½
220, 3 color	.34¼	.36½	.34¼	.36½	.34¼	.36½
600, steam refined	.08¾	.09	.08¾	.09	.08¾	.09
635, steam refined	.10¼	.10½	.10¼	.10½	.10¼	.10½
650, steam refined	.12¼	.12½	.12¼	.12½	.12¼	.12½
600, Pennsylvania flash	.17½	.18	.17½	.18	.17½	.18
630, Pennsylvania flash	.26½	.27	.26½	.27	.26½	.27
*550, E filtered	.17¼	.18	.17¼	.18	.17	.17¾
*600, E filtered	.18¼	.19	.18¼	.19	.18¼	.19
600, E filtered	.17¼	.17¾	.17¼	.17¾	.17¼	.17¾
600, D filtered	.25	.25½	.25	.25½	.25	.25½
550, E filtered	.17½	.18	.17½	.18	.17½	.18
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.33	.33½	.33	.33½	.33	.33½
†122-124 White Crude Scale Wax	.02⅞	.03¼	.02⅞	.03¼	.02⅞	.03¼
†124-126 White Crude Scale Wax	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.07	.07½	.07	.07½	.07	.07½
No. 3 color, 200 vis., pale oil	.10	.11	.10½	.11	.10½	.11
No. 3 color, 300 vis., pale oil	.11	.12	.11½	.12	.11½	.12
No. 3½ color, 500 vis., pale oil	.13	.14	.13½	.14	.13½	.14
No. 4 color, 750 vis., pale oil	.15	.16	.16	.16½	.16	.16½
No. 5 to 6 color, 200 vis., red oil	.08½	.09	.08½	.09	.08½	.09
No. 5 to 6 color, 300 vis., red oil	.09½	.10	.10	.10½	.10	.10½
No. 5 to 6 color, 500 vis., red oil	.11	.11½	.11½	.12	.11½	.12
No. 5 to 6 color, 750 vis., red oil	.14	.14½	.14½	.15	.14½	.15
No. 2 color, 200 vis., pale filtered	.13	.14	.13	.14	.13	.14
No. 2 color, 300 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15
No. 2½ color, 500 vis., pale filtered	.16	.17	.16	.17	.16	.17
No. 2½ color, 750 vis., pale filtered	.20	.21	.20	.21	.20	.21
CALIFORNIA—						
130 vis., 2½-3 color	.10½	.11	.10½	.11	.10½	.11



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

200 vis., 2½-3 color	.11	.11½	.11	.11½	.11	.11½
300 vis., 3 -3½ color	.11½	.12	.11½	.12	.11½	.12
350 vis., 3½-4 color	.12	.13	.12	.13	.12	.13
400 vis., 3½-4 color	.13	.15½	.13	.15½	.13	.15½
Red Neutral:						
200 vis.,4½-5 color	.09½	.10½	.09½	.10½	.09½	.10½
300 vis., 5 -6 color	.10½	.11	.10½	.11	.10½	.11
400 vis., 5 -6 color	.12	.13½	.12	.13½	.12	.13½
500 vis., 4½-5 color	.13½	.14½	.13½	.14½	.13½	.14½
500 vis., 5 -6½ color	.12½	.13½	.12½	.13½	.12½	.13½
600 vis., 6 plus color	.13½	.14½	.13½	.14½	.13½	.14½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	July 5	June 28	June 21
Gasoline, U. S. Motor, 58-60 437	.08¾	.09	.09
Kerosene, water white, 41-43	.07	.07	.07
*Fuel Oil, bunker "C," 14-16, per bbl.	1.65	1.65	1.65
*Fuel Oil, Diesel, 28-30, per bbl.	2.20	2.20	2.20
Gas Oil, 28 plus	.05½	.05½	.05½
25 pale Paraffin Oil	.12	.12	.12
28 pale Paraffin Oil	.07¼	.07¼	.07¼
285 red Paraffin Oil	.12¾	.12¾	.12¾
250 red Paraffin Oil	.11¾	.11¾	.11¾
225 red Paraffin Oil	.10¾	.10¾	.10¾
200 red Paraffin Oil	.09¾	.09¾	.09¾
Refined Wax:			
120-122 a.m.p., per lb.	.03⅞	.03⅞	.03⅞
125-127 a.m.p., per lb.	.04	.04	.04
130-132 a.m.p., per lb.	.04½	.04½	.04½
135-137 a.m.p., per lb.	.05	.05	.05
Petrolatum, in bbls.; carload lots, per lb.:			
Dark green	.01¾	.01¾	.01¾
Amber	.03¼	.03¼	.03¼
Extra amber	.03⅝	.03⅝	.03⅝
Cream	.05½	.05½	.05½
Lily white	.07	.07	.07
Snow white	.08	.08	.08

*Lighterage 6.5c a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	July 5	June 28	June 21
Gasoline, U. S. Motor, 58-60 437, in cases	.2440	.2440	.2440
Kerosene, standard white, in cases	.1615	.1615	.1615
Kerosene, water white, in cases	.1715	.1715	.1715
600 steam refined cylinder stock, in bbls.	.17	.17	.17
635 steam refined	.19	.19	.19
650 steam refined	.21	.21	.21
600 Pennsylvania flash	.25	.25	.25
630 Pennsylvania flash	.34	.34	.34
600 Warren E	.36	.36	.36
600 Oil City E	.24½	.24½	.24½
Light 135 Bright Stock	.41	.41	.41
Dark 135 Bright Stock	.39	.39	.39

LOS ANGELES EXPORT PRICES

	July 5		June 28		June 21	
Kerosene water white	.04¼	.04½	.04¼	.04½	.04¼	.04½
U. S. Motor Gasoline, 53-55 437 e.p.	.06¾	.06¾	.05½	.06½	.05½	.06½

CALIFORNIA CRUDE PRICES

***Standard Oil Co.-Union Oil Co. (Effective April 1, 1927)**

Gravity—	Fullerton, Seal Beach, Long Beach, Huntington Beach, Richfield, Rosecrans-Dom'guez, Torrance-Inglewood 1	Whittier, La Habra, Montebello 2	Kern River, Newhall-McKittrick, Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills, Coyote 3	4	Santa Fe Springs 5	Coalinga 6	Wheeler Ridge 7	Santa Maria, Ventura, Orcutt, Salt Lake 8
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.85	.85	.75	.85	....	.75	.75	.85
16°	.85	.85	.75	.85	....	.75	.75	.85
17°	.85	.85	.75	.85	....	.75	.75	.85
18°	.85	.85	.75	.85	....	.75	.75	.85
19°	.85	.85	.75	.85	....	.75	.75	.85
20°	.85	.85	.77	.85	....	.76	.76	.85
21°	.86	.85	.79	.86	.85	.77	.77	.85
22°	.87	.85	.81	.87	.85	.78	.78	.85
23°	.88	.85	.83	.88	.85	.79	.79	.85
24°	.89	.85	.85	.89	.85	.80	.80	.85
25°	.90	.86	.87	.90	.86	.81	.81	.86
26°	.92	.87	.89	.91	.87	.83	.82	.87
27°	.94	.88	.91	.92	.88	.85	.83	.88
28°	.96	.89	.93	.93	.89	.87	....	.89
29°	.98	.90	.96	.94	.91	.89	....	.91
30°	1.00	.91	.99	.95	.93	.91	....	.93
31°	1.03	....	1.02	....	.95	.93	....	.95
32°	1.06	....	1.05	....	.97	.95	....	.97
33°	1.09	....	1.08	....	.99	.97	....	.99
34°	1.13	....	1.11	....	1.01	.99	....	1.01
35°	1.15	....	....	....	1.03	1.01	....	1.03
36°	1.18	....	....	....	1.06	....	....	1.06
37°	1.21	....	....	....	1.09	....	....	1.09
38°	1.24	....	....	....	1.12	....	....	1.12
39°	1.27	....	....	....	1.15	....	....	1.15
40°	1.30	....	....	....	....	....	....	....
41°	1.33	....	....	....	....	....	....	....
42°	1.36	....	....	....	....	....	....	....

*Column 1—Long Beach, Seal Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Fullerton, 14 to 30 degrees; Torrance and Inglewood, 14 to 28 degrees; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 2—Whittier crude, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 3—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset, Buena Vista and Elk Hills, 14 to 32 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 8—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura and Orcutt, 14 to 39 degrees. Posted only by Union Oil Co.

CRUDE OIL GRAVITY PRICE TABLE

Gravity—	Okla., Kans., N. C. Tex., La.-Ark. 1	Smackover, Ark. 2	Stephens, Ark. 3	Wheeler and Gray Counties, (Texas Panhandle) 4	Crane, Upton Crockett Counties (West Texas) 5	Salt Creek, Wyo. 6	Grade B & Light Crude (G. Coast) 7	Somerset, (South Central Texas) 8
Below 24	....	1.00	....	....	....	....	....	....
24 to 24.9	....	1.26	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	1.15	....
25 to 25.9	....	....	....	....	....	....	1.17	....
Below 26	....	....	....	....	.70	....	....	....
26 to 26.9	....	....	....	....	.72	....	1.19	....
27 to 27.9	....	....	....	....	.74	....	1.21	....
Below 28	****	....	1.00	....	....	....	....	....
28 to 28.9	1.12	....	1.02	.80	.76	....	1.23	....
29 to 29.9	1.14	....	1.04	.82	.78	1.14	1.25	....
30 to 30.9	1.16	....	1.06	.84	.80	1.16	1.27	....
31 to 31.9	1.18	....	1.08	.86	.82	1.18	1.29	....
32 to 32.9	1.20	....	1.10	.88	.84	1.20	1.31	1.05
33 to 33.9	1.22	....	....	.90	.86	1.22	1.33	1.07
34 to 34.9	1.24	....	....	.92	.88	1.24	1.35	1.09
35 to 35.9	1.26	....	....	.94	.90	1.26	1.37	1.11
36 to 36.9	1.28	....	....	.96	.92	1.28	....	1.13
37 to 37.9	1.30	....	....	.98	....	1.30	....	1.15
38 to 38.9	1.32	....	....	1.00	....	....	....	1.17
39 to 39.9	1.34	....	....	1.02	....	....	....	....
40 to 40.9	1.36	....	....	1.04	....	....	....	....
41 to 41.9	1.38	....	....	1.06	....	....	....	....
42 to 42.9	1.40	....	....	1.08	....	....	....	....
43 to 43.9	1.42	....	....	1.10	....	....	....	....
44 to 44.9	1.44	....	....	1.12	....	....	....	....
45 to 45.9	1.46	....	....	....	....	....	....	....
46 to 46.9	1.48	....	....	....	....	....	....	....
47 to 47.9	1.50	....	....	....	....	....	....	....
48 to 48.9	1.52	....	....	....	....	....	....	....
49 to 49.9	1.54	....	....	....	....	....	....	....
50 to 50.9	1.56	....	....	....	....	....	....	....
51 to 51.9	1.58	....	....	....	....	....	....	....
52 and above	1.60	....	....	....	....	....	....	....

Column 1—Magnolia Petroleum Co. posted new schedule May 5, making price below 33 gravity $1.05 per barrel, with 2 cents increase per degree higher in gravity, taking 33-33.9 gravity at $1.07 as basis, with a top price of $1.45 for 52 and above.

Oklahoma: Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., March 13; Carter Oil Co., The Texas Company, March 14.

North Central Texas—(Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas), Iatan and Panola (Magnolia only), Currie, Necona, Moran and Corsicana light); Texas, Prairie, Sinclair and Gulf, March 12; The Texas Company, Humble Oil & Refining Co., March 14.

Kansas—Prairie, Sinclair, March 12; Carter, Texas, March 14.

Arkansas and North Louisiana—(Caddo, Bull Bayou, Crichton, DeSoto, Haynesville, Homer and El Dorado only); Standard Oil Co. of Louisiana, March 14; The Texas Company, March 14; Magnolia Petroleum Co., Pine Island, Haynesville and Bull Bayou, El Dorado, Gulf Pipe Line Co., March 14.

Column 2—Standard Oil Co. of Louisiana, The Texas Company, Gulf, Atlantic, March 17, Magnolia Petroleum Co. (March 16) posted price of $1 for below 24 degrees and $1.15 for 24 and above. Louisiana Oil Corp. posted following prices effective March 16: Below 24, $1, 24 to 27.9, $1.15; 28 to 28.9, $1.17; 29 to 29.9, $1.19; 30 and above, $1.21.

Column 3—Atlantic Oil Producing Co., March 14.

Column 4—Humble Oil & Refining Co. and Gulf Pipe Line Co., March 14.

Column 5—Humble Oil & Refining Co., Kay County Gas Co. and Gulf Pipe Line Co., March 14.

Column 6—Midwest Refining Co., March 12. All crude over 37 gravity, $1.30 per barrel.

Column 7—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. posts 2 cents differential for each degree above 35 gravity and $1.47 for 40 gravity and above.

Column 8—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

****Prices for crude below 28 gravity: Oklahoma, Kansas and Texas, Magnolia Petroleum Co., $1.10, March 12; Arkansas, North Louisiana, March 14. Other companies, 2 cents less for each degree with exception of Humble Oil & Refining Co., which pays $1.12 for crude below 28 degrees gravity.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927)	$1.00
Other fields	See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

*Carson County	$ .95
*Hutchinson County	.95
Gray-Wheeler Counties	See gravity table

*Humble Oil & Refining Co., Magnolia Petroleum Co., Gulf Pipe Line Co. and Kay County Gas Co., March 14.

WEST TEXAS

*Iatan (Same as North Texas)	
Crane-Upton-Crockett	See gravity table

*Includes Howard County and Westbrook Fields. Kay County Gas Co. pays $1.05 for Howard County crude, effective May 21.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (March 17)	$1.00
Bellevue (Feb. 24, 1927)	1.25
Urania (March 16, 1927)	1.00
East El Dorado (March 16)	1.00
Other fields	See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Gulf Refining Co. and Magnolia Petroleum Co.; Urania, Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop.)

‡Grade A (March 14)	$1.20
Grade B	See gravity table
*Jennings, La. (March 14)	1.05
†Saratoga, Batson, Dayton (March 14, 1927)	1.00
**Markham (March 14)	1.00

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. **The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (May 5)	$1.00
†Mirando (March 14)	1.00
Rockdale-Minerva (Milam County)	1.25
*Thrall	1.75
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co. Thrall prices same as north central Texas less 19⅛ cents per cwt. freight.

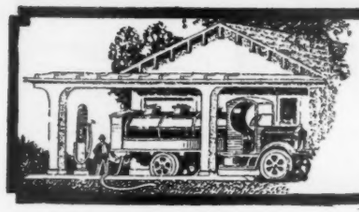
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.
(Effective March 14)

Rock Creek, Wyo. (March 12)	$1.35
Salt Creek	See gravity table
Big Muddy (March 12)	1.35
Mule Creek (May 1)	1.10
Grass Creek, light (March 12)	1.33
Grass Creek, heavy	.93
Elk Basin (March 12)	1.33
Lance Creek (March 12)	1.33
Poison Spider	1.00
Notches	.65
Rex Lake (February 23)	1.10
Osage	1.33
Lost Soldier (contract) (May 17)	1.60
Greybull-Torchlight	1.33
Hamilton Dome	1.35
Cat Creek (Mont.)	1.33
Sunburst (Mont.) (October 5)	1.35
Artesia (March 12)	1.00

(Continued on Page 128)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns July 5.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Chicago dist. ..	14.0	16.0	...	12.0
Decatur, Ill. ..	14.2	16.2	...	12.1
E. St. Louis ...	13.1	15.35	...	11.2
Joliet	14.4	16.4	...	12.3
Peoria	14.2	16.2	...	12.1
Quincy	14.2	16.2	...	10.9
Davenport, Ia..	16.5	18.5	2.0	12.3
Des Moines ..	16.0	18.0	2.0	12.3
Keokuk	16.5	18.5	2.0	12.3
Sioux City	16.1	18.1	2.0	11.9
Duluth, Minn. .	15.5	17.5	2.0	12.9
Minneapolis ...	14.0	16.0	2.0	12.9
Mankato	17.1	19.1	2.0	12.7
LaCross, Wis ..	17.2	19.2	2.0	13.0
Milwaukee ...	16.1	18.1	2.0	11.9
Madison	16.3	18.3	2.0	12.1
Detroit, Mich.	16.8	18.8	2.0	12.7
Grand Rapids .	16.7	18.7	2.0	13.6
Saginaw	16.9	18.9	2.0	13.6
Evansville, Ind.	17.0	19.0	3.0	13.0
Ft. Wayne	17.4	19.4	3.0	13.4
Indianapolis ..	17.2	19.2	3.0	13.2
South Bend ...	17.4	19.4	3.0	13.4
Fargo, N. D. ..	17.0	19.0	2.0	14.9
Huron, S. D. ..	15.5	17.5	3.0	13.9
Sioux Falls	17.3	19.3	3.0	13.4
K. C. Mo.	14.9	16.9	3.0	10.6
*Springfield ...	16.5	18.8	3.0	11.5
*St. Louis	15.6	17.9	2.5	11.3
*St. Joseph	16.5	18.5	3.0	11.2
Wichita, Kans..	14.8	16.8	2.0	10.8
Bartlesville, Ok.	15.8	17.8	3.0	10.8

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	16.0	11.75
V. M. & P. naphtha	18.0	13.75
Cleaner's naphtha	18.0	13.75
Stanisol	19.0	.....

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 or more gallons	7.5

Tank wagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

Outside the Chicago district, the following quantity discount schedule is in effect on monthly tank wagon deliveries of gasoline: 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. These discounts include the 1 cent allowed on dumps of 50 gallons or more at one delivery.

Within the Chicago district the following quantity discount schedule is in effect on tank wagon deliveries of gasoline: 750 to 2,000 gallons, one-half cent; 2,000 to 3,000 gallons, three-fourths cent; 3,000 to 6,000 gallons, 1 cent; 6,000 to 10,000 gallons, 1½ cents; 10,000 to 15,000 gallons, 2 cents; 15,000 gallons or more, 3 cents. These discounts are in addition to the special discount of 1 cent on dumps of 100 gallons or more at one delivery.

If the quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term less the monthly payments made during the year.

*State tax 2 cents; remainder city tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
All Ohio points	19.0	21.0	3.0	15.0

SOUTHWESTERN DISTRICT

***Magnolia Petroleum Co.**

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Dallas, Tex. ...	15.0	18.0	3.0	11.0
Fort Worth ...	15.0	18.0	3.0	10.0
Houston	15.0	19.0	3.0	15.0
San Antonio	15.0	18.0	3.0	11.0
El Paso	17.0	19.0	3.0	16.0
Texarkana	15.0	18.0	3.0	12.0
Muskogee, Ok..	14.0	17.0	3.0	09.0
Okla. City	14.0	17.0	3.0	09.0
Tulsa	14.0	17.0	3.0	09.0
Ft. Smith, Ark.	18.0	21.0	5.0	12.0
Little Rock ...	18.0	21.0	5.0	12.0

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, one-half cent; over 2,000 gallons, three-quarters cent; over 3,000 gallons, 1 cent; over 4,500 gallons 1¼ cents; over 6,000 gallons, 1½ cents; over 9,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1½ cents; over 400 gallons, 1½ cents; over 500 gallons a month, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases in the tank wagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
*N. Orleans, La.	15.5	18.5	3.0	14.0
Baton Rouge ..	14.0	17.0	3.0	12.5
Alexandria	15.0	18.0	3.0	14.0
LaFayette	15.0	18.0	2.0	13.5
Lake Charles ..	15.5	18.5	2.0	14.0
Shreveport . . .	15.5	18.5	2.0	13.0
Knoxville, Tenn.	19.5	22.5	3.0	15.0
Memphis	15.0	18.0	3.0	14.0
Chattanooga ..	19.5	22.5	3.0	15.0
Nashville	18.0	21.0	3.0	15.0
Bristol	19.0	22.0	3.0	14.0
Lit. Rock, Ark.	18.0	21.0	5.0	12.0

*Tax of 3 cents includes city tax of 1 cent.
*Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Atlanta, Ga. ...	18.0	21.0	4.0	15.0
Augusta	19.0	22.0	4.0	16.0
Macon	19.0	22.0	4.0	16.0
Savannah	16.0	18.0	4.0	14 0
Birm'h'm, Ala.	18.0	21.0	4.0	15.5
Mobile	17.0	20.0	4.0	15.0
Montgomery ..	19.0	22.0	5.0	16.5
Clarks'le, Miss.	17.0	20.0	4.0	12.5
Jackson	17.0	20.0	4.0	14.5
Natchez	16.5	19.5	4.0	14.0
Gulfport	18 5	21.5	6.0	14 0
Vicksburg	16.5	19.5	4.0	14.0
Jack'ville, Fla.	18.0	21 0	5.0	14 0
Miami	20 0	23 0	5.0	14 0
Pensacola	19 0	22 0	5 0	15 5
Tampa	17.0	20.0	5.0	15.0
Lexington, Ky.	18.0	21.0	5.0	15.5
Covington, Ky.	19 0	22.0	5.0	15.5
Louisville	19.0	22.0	5.0	15.0

In addition to the state tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Prices in Georgia include one-half cent inspection fee on gasoline and kerosene; in Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene only. Pensacola tax includes 1 cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Pittsburgh, Pa.	16.0	*21.0	...	14.0
Philadelphia ..	13.0	17.0	...	14.0
Scranton	16.0	*21.0	...	14.0
Allentown	16.0	*21.0	...	14.0
Altoona	16.0	*21.0	...	14.0
Erie	14.0	19.0	...	14.0
Dover, Del. ...	19.0	22.0	3.0	14.0
Wilmington ...	19.0	22.0	3.0	14.0
Spring'd, Mass.	17.0	19.0	...	15.0
Worchester ...	17.0	19.0	...	15.0
Boston	17.0	19.0	...	15.0
Providence, R.I.	18.0	20.0	1.0	15.0
Hartford, Conn.	21.0	23.0	2.0	15.0
New Haven ...	21.0	23.0	2.0	15.0

*Includes tax of 2 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Albany, N. Y. .	19.0	21.0	...	15.0
*New York ...	19.0	23.0	...	15.0
Buffalo	18.0	21.0	...	14.0
Rochester . . .	13.0	16.0	...	14.0
Syracuse	19.0	21.0	...	15.0
Boston, Mass. .	17.0	19.0	...	15.0
Augusta, Me. ..	22.0	26.0	3.0	15.0
M'nchest'r, N.H.	17.0	21.0	2.0	15.0
Burlington, Vt.	21.0	23.0	2.0	15.0

*Price in steel barrels.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
San Francisco .	16 0	20 0	2 0	15 5
Pueblo	17 0	17 0	2.0	15 5
Los Angeles ..	15 5	19 5	2 0	15 5
Reno, Nev. ...	22.0	26 0	4 0	19.0
Portland, Ore. .	17 5	21 5	3 0	16.5
Seattle, Wash..	16 5	20 5	2 0	16.5
Tacoma	16 5	20 5	2.0	16 5
Spokane	20 5	24 5	2.0	20.5
Phoenix, Ariz..	22.0	26.0	3.0	20.5

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Atlantic City .	18 0	....	2.0	14 0
Newark, N. J..	18 0	20 0	2 0	14 0
Annapolis, Md..	20 0	23.0	4.0	12 0
Baltimore	20.0	23.0	4.0	10.0
Cumberland	20.0	23.0	4.0	14.0
Washington ..	18 0	21.0	2.0	12.0
Danville, Va. ..	20.5	....	4.5	14.0
Norfolk	20.5	20 5	4.5	12 0
Petersburg	20.5	23.5	4.5	14.0
Roanoke	20.5	23.5	4.5	14.0
Richmond	20.5	23.5	4.5	14.0
Charleston, W. Va.	20 0	23.0	4 0	13.0
Keyser	20 0	....	4 0	14 0
Parkersburg ...	17 0	20 0	4 0	14.0
Wheeling	20 0	23 0	4.0	14 0
Charlotte, N. C.	20.0	23.0	4.0	14.0
Hickory	20.0	23.0	4.0	14.0
Mt. Airy	20.0	23.0	4.0	14.0
Salisbury	20.0	23.0	4.0	14.0
Charl'stn, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	20.0	5.0	14.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Omaha	14.25	16.25	2.0	12.25
McCook	17.75	17.75	2.0	13.75
Norfolk	16.75	18.75	2.0	12.75
N. Platte	17.75	19.75	2.0	13.50
Scottsbluff	17.25	19.25	2.0	13.00

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incids tax of	Tank wagon
Denver, Colo. ..	18.0	20.0	2.0	14.5
Pueblo	18.0	20 0	2.0	14 5
Grand Junction	21 5	23 5	2 0	18 0
Casper, Wyo. ..	18.0	20.0	3.0	13.0
Cheyenne	19.0	21.0	3.0	14.5
Butte, Mont. ..	22.0	22.0	3.0	19.0
Helena	22.5	34.5	3.0	19.0
Salt Lake, Utah	21.0	23.0	3.5	17.0
Boise, Idaho...	23.5	25.5	4.0	19.0
Twin Falls	23.5	25.5	4.0	19.0
Albu'que, N. M.	21.0	24.0	5.0	17.0

TANK WAGON CHANGES

July 1—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 2 cents in Savannah, Ga., and 1 cent in Covington, Ky.; increased the gasoline tank wagon 1 cent throughout Florida to equalize the tax increase from 4 to 5 cents and increased the gasoline tank wagon and station prices 1 cent in Gulfport, Miss. Kerosene was decreased 1 cent in Clarksdale, Miss. Standard Oil Co. of California increased the gasoline tank wagon and station prices 1 cent at all points. Standard Oil Co. of New Jersey increased the gasoline tank wagon and station prices 2 cents in New Jersey and one-half cent in West Virginia to equalize the tax effective then and increased the gasoline tank wagon and station prices 2 cents in Washington, D. C. Kerosene was reduced 2 cents in Annapolis, Md.; and Norfolk, Va., and 1 cent in Keyser, W. Va. Standard Oil Co. of New York posted the gasoline tank wagon price at 13 cents and the station price 16 cents in Rochester, N. Y.

July 2—Continental Oil Co. increased the gasoline tank wagon 1 cent and station price 3 cents in Pueblo, Colo.

TANKER RATE LOWER FROM PACIFIC COAST

LOS ANGELES, Calif., July 2.—No change in the California tanker market has taken place during the past week or 10 days except possibly that the unusual spread between clean and dirty boats, in favor of the latter, is more sharply pronounced with dirty tankers fairly firm at $1.03 for loadings north of Hatteras. Weakness in clean tankers for California oil continues to make itself more manifest with a new low rate of 82 cents reported last week on an intercoastal fixture. The W. L. Steed, a white boat of American registry with a capacity of approximately 75,000 bbls., has been chartered by the Tide Water Oil Co. for an early movement from San Francisco to north of Hatteras at 82 cents. An unnamed American tanker was fixed a short time later by another company for a June loading of fuel oil from Los Angeles Harbor to north of Hatteras at $1.03.

Based on the above figures gasoline can be laid down on the East coast at approximately 10 or 12 cents per gallon. A 25-gravity California crude should run around $2 per barrel laid down on the Atlantic with fuel oil ranging between $1.50 and $1.75 per barrel.

The Chile Steamship Co., controlled by the Chile Exploration Co., is changing the registry of four tankers operated by that company from British to American due principally to the fact that this group of tankers have been and will continue to operate out of Los Angeles Harbor. The tankers affected are the Chuky, Chiloil, Chilsco and Chibar. The Chuky arrived several days ago from Tocopila flying a British flag but upon departing an American flag flew from her taffrail.

The tanker Athelfoam, owned by the British Molasses Co., was in recently and her departure with a fuel oil cargo of approximately 50,000 bbls. brings to light a rather interesting situation. This tanker, together with several others of the same company, ply between Cuba and New York in the molasses trade and, while they will continue to engage in this business, periodical movements will be made between California and England. In other words, these tankers when ordered home to England for overhaul will come to California for fuel oil if conditions permit. The Athelfoam is the first of this group of British Molasses Co.'s tankers to visit Los Angeles Harbor.

CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces open competitive examination for Associate Fuel Engineer, $3,000, and Assistant Fuel Engineer, $2,400; applications to be filed not later than August 2.

CRUDE OIL PRICES

(Continued from Page 127)

Hogback (N. Mex.) (March 14)	1.30

Note: Salt Creek, Osage, Cat Creek, Graybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective April 13)

Penna Grade Oil in New York Transit Line (New York)	$2.90
Bradford District Oil in National Transit Lines (Pennsylvania)	2.90
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.80
Penna Grade Oil in Southwest Pennsylvania Lines (West Virginia)	2.80
Penna Grade Oil in Eureka Pipe Line lines (Pennsylvania)	2.75
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.60
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) March 16.....	1.40
Corning 36-cent grade oil in Buckeye Pipe Line Co.'s line (March 17)	1.35
Corning 25-cent grade oil in Buckeye Pipe Line Co.'s lines (March 17).....	1.45
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) March 16	1.50
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky)	.95
Keister (Pennsylvania)	1.10

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 14)

Lima	$1.71
Wooster	1.77
**Saginaw, Mich., Saginaw Sand (May	
Illinois	1.60
Indiana	1.48
Princeton	1.60
Plymouth	1.33
Waterloo (Nov. 17, 1926)	1.35
*Western Kentucky	1.33
**Saginaw, Mich., Berea Sand (May	
27)	1.95
27)	2.05
†Cumberland, Barren, Clinton and Monroe Counties, Kentucky (March 16)..	1.50
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 16, 1927)	1.50
†Clay County, Tennessee (November 18	2.35
§Oil Springs (Canada)	2.18
‖Petrolia (Canada)	2.11

*Posted by Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§Posted by Imperial Oil Co., Ltd.
**Posted by Sun Oil Co.

*Tuxpam light (f.o.b. Mex. ports).....	$1.35
†Panuco heavy (f.o.b. Mex. ports).....	1.15
Tuxpam (New York)	2.15
Panuco (New York)	1.80

*Plus 32.328c tax. †17.631c tax.

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SINCLAIR REFINING COMPANY, INC.

Also Makers of Sinclair Gasoline and H-C Gasoline

45 NASSAU STREET, NEW YORK

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Oil Securities Less Active and Off

Under Continued Pressure. Upward Movements in Some Issues Have Temporarily Come to a Halt

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, July 4.—Oil securities, although not so active, fell off in price during the past week. Drives were launched on Phillips and Marland but without a great degree of success, although new lows were registered in these issues. There were practically no strong spots in the oil list as there had been in previous weeks.

Statistical Position

The government oil statistics indicate that stocks of gasoline in the United States are being drawn upon substantially, while stocks of crude oil and other products are being added to. While there has been a large net addition to stocks, the decline in gasoline is nevertheless favorable. The crux of the oil situation, from the viewpoint of average oil company earnings, is the price of gasoline. Heavy withdrawals on stocks of this product must ultimately mean a larger run of crude in refineries to make up any deficit that may develop. This, by increasing the demand on the part of refiners for crude oil, should help the crude situation.

Additions to stocks of crude may not mean so much if the additions consist largely of low grade oil. Refiners, finding themselves short of gasoline, will have to revert to cracking the heavy oil, and may find it more difficult even then to make up for the natural decline due to heavy seasonal consumption.

There are some indications of improvement in gasoline prices. The improvement should continue so long as stocks are being drawn upon, even though crude oil stocks may keep on increasing.

While a large part of the increase in stocks of crude oil might consist of high grade Seminole crude, it is understood that the policy of the industry has been to run this oil immediately and let the heavier crudes remain in the tanks, in as much as Seminole crude evaporates more rapidly when it stands. If this is the case, any decline in Seminole production of important dimensions should find the industry stocked lightly with this grade.

Oils Under Pressure

Oil securities have been under continued pressure, but the violent upward movements in some issues which took place in May and June have temporarily, at least, come to a halt. The complexion of the oil security markets seems to have changed somewhat.

Barnsdall Corp.

At a meeting of the directors of the Barnsdall Corp. it was discovered that legal complications might arise in connection with the stock purchase warrants attached to the outstanding 15-year 6 per cent sinking fund gold debentures, if the common stock of Barnsdall was made all of one class, and the denominations of Barnsdall A and B were done away with, in as much as the stock purchase warrants were entitled to purchase Class B stock of Barnsdall Corp.

Accordingly, the directors, in order to accomplish substantially the same result, determined to submit to stockholders a proposal to reclassify the existing stock so that there would be a sufficient authorized but unissued A stock, reducing by the same number of shares the authorized but unissued B stock, to permit the corporation, upon the approval of the stockholders, to offer to exchange each share of outstanding Class B nonvoting capital stock for a share of Class A voting capital stock, and at the same time giving all owners of stock purchase warrants the right to subscribe, in the first instance, for Class A stock in place of Class B stock, or, if they have subscribed for Class B stock, to exchange such Class B stock, share for share for Class A stock.

The stockholders' meeting will be held August 4 for the purpose of considering these proposals.

Independent Oil & Gas

The net earnings of the Independent Oil & Gas Co. after all charges in the first six months of 1927 are estimated at $1,000,000, or about $2 a share on the 500,000 outstanding no par value shares. In the first quarter of this year net was $634,530, equal to $1.26 a share. In the first six months of 1926 Independent reported net of $929,429, equal to $1.86 a share.

The regular quarterly dividend of 25 cents a share was declared, although action was taken later than the regular due date in April.

Chesebrough Manufacturing

The Chesebrough Manufacturing Co., Ltd., reports for the year ended December 31, 1926, net profit of $967,189 after taxes and charges, equivalent to $8.06 a share (par $25) earned on the outstanding 120,000 shares of stock. This compares with $1,003,032 or $8.35 a share, in 1925.

The profit and loss account for 1926 compares with 1925 as follows:

	1926	1925
Net profit	$967,189	$1,003,032
Dividends	540,000	427,500
Surplus	427,189	$575,532
Previous surplus	855,663	1,742,491
Total surplus	$1,282,852	$2,318,023
Reserve approp.	156,497	1,336,484
Pfd. stock prem., etc.	316	125,877
P. & L. Surplus	$1,126,671	$855,662

Reiter-Foster Oil

At a special meeting, stockholders of the Reiter-Foster Oil Co. approved the increase in authorized capital stock to 400,000 shares of no par value, from 250,000. Stockholders of record July 8 will have the privilege of subscribing to the 150,000 shares of additional stock at $5 a share on the basis of three shares for each four shares held. Rights expire July 18. There are 213,477 shares outstanding. Subscription warrants will be issued to stockholders of record July 8.

Shreveport-El Dorado Pipe Line

The Shreveport-El Dorado Pipe Line Co. reports May profit of $31,977 after interest, rentals, federal taxes, etc., but before reserves and dividends, compared with $59,676 in May, 1926. Profit for the first five months of 1927, on the above basis, totaled $223,307, against $218,540 in the same period of the previous year.

Shaffer Oil & Refining

Report of the Shaffer Oil & Refining Co., including subsidiaries with intercompany items eliminated, for the 12 months ended March 31, 1927, shows gross of $21,345,035. Balance after expenses, taxes and interest, but before reserves and amortization, was $4,262,228, and preferred dividends $1,061,667 were paid, leaving balance for the retirement and depletion reserves, amortization and common dividends of $3,200,561.

The balance sheet of the Shaffer Oil & Refining Co. as of March 31, 1927, shows total assets of $47,618,672, current assets of $5,753,199, and current liabilities of $4,830,191. The common stock and surplus represented by 40,000 shares of $1 par value and 128,464 shares of no par value was $2,558,824.

Lobitos Oilfields

The Lobitos Oilfields, Ltd., declared a final dividend for 1926 of 25 per cent, making 35 per cent for the year. The company placed £50,000 to reserves and carried forward £249,000.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. July 2	June 27	1927 High	1927 Low	1926 High	1926 Low	1925 High	1925 Low
Amerada Corp.	..	30¼	30	37⅝	27⅝	32⅞	24¾	..	..
Atlantic Refining, com.	100	111¼	111⅝	125⅝	107	128⅝	97	117½	96½
Barnsdall "A"	25	26	25½	35½	23½	32½	23½	33½	18⅝
California Petroleum, com.	25	22⅞	22	32⅞	21½	38⅛	30⅞	34⅜	23⅜
Houston Oil	100	157⅝	150½	166½	60⅛	75	50¼	85	59
Independent Oil & Gas	..	18¼	18⅝	32¾	17⅝	34	20¼	41⅜	13½
Louisiana Oil	10	11⅝	11⅝	18½	11½	19⅝	12	23⅜	13⅜
Maracaibo	..	*13½	13	22⅝	15	27⅜	18⅝	35½	20⅜
Marland	..	32¼	31⅝	58⅛	31	63⅝	49¼	60⅛	32⅝
Mid-Continent Petroleum	..	30	29⅝	39⅜	29	41	25⅝	38	25¾
National Supply	50	82⅝	79⅝	95⅝	76	84⅞	55½	71	54¾
Oil Well Supply	25	38	37⅜	44⅜	31¼	36	30	38	33⅜
Pan American, B	50	54	56¼	66⅜	56⅝	72⅜	56⅛	83⅞	59½
Pan American, Western B	..	*20⅜	20½	37⅞	19	46	34	94⅝	37¼
Phillips Petroleum	..	39⅝	38⅜	60¼	38¼	54⅞	42⅛	47⅛	36¼
Producers & Refiners	50	25	24¼	33⅞	16⅜	26	11	32⅝	12½
Pure Oil, com.	..	26	25⅜	33½	26	31	25⅜	33¾	25½
Royal Dutch, N. Y., sh.	13.40	*49	48½	54½	48½	57⅜	49⅜	57⅜	48¼
Shell Transport	10	44½	*42	49	43⅝	48⅞	42	49	39¾
Shell Union, com.	..	26⅝	26½	31⅜	25⅝	30⅞	24	28⅜	21⅝
Simms Petroleum	10	15½	15½	22¾	15⅝	28⅝	16½	28½	18⅜
Sinclair Consolidated	..	16¾	16½	22⅝	16⅛	24⅞	16⅜	24⅝	17
Skelly Oil	25	26	24⅝	32¾	25	37½	27	32½	21⅝
Standard of California	25	52⅞	51⅜	60⅜	50⅜	63½	54	67¼	57½
Standard of New Jersey, com.	25	36⅜	36¼	41⅜	35½	46⅜	37½	47½	38⅜
Standard of New York	25	30⅛	30	34½	29⅞	47¼	30⅝	48¾	40
Sun Oil Co.	..	32	32½	34⅜	30	41⅝	30⅛	48⅞	28½
The Texas Company	25	46⅜	45½	58	45	58	48	55	43⅜
Texas Pacific Coal & Oil	10	15	13⅜	18⅞	12	19½	12½	23⅜	11
Tide Water Associated Oil	..	16½	16¼	23½	15½	21	17	..	..
Transcontinental	..	9	8¼	8⅜	3⅜	5½	3	5⅝	3½
Union Oil of California	25	42	40	56½	39⅝	53⅜	37¼	43⅝	33½
Union Tank, com.	100	*112¼	113½	115	95	120⅜	84½	‡134	118
White Eagle Oil & Refining	..	22⅝	23½	27½	22	29⅜	25½	21⅜	25⅝
Standard Oils									
Anglo-American Oil	£1	18⅛	*19	21⅝	18¾	19¾	16½	26¾	17½
Borne Scrymser	25	*56	*56	69	49¼	75	65	‡240	205
Buckeye Pipe Line	50	*55	*56	58	45	59½	42	72	63½
Chesebrough Manufacturing Co.	25	103	*103	107	76½	81¼	63	74	98¼
Continental	10	17	17½	22⅝	17½	25⅝	19¼	31½	21⅝
Cumberland Pipe Line	100	*89	*89½	‡137	106	137	102	156	128
Eureka Pipe Line	100	*54	*54	56¼	47	53¾	43	96	61¼
Galena Signal, com.	100	*7⅛	*7⅝	13½	7⅛	32½	9⅞	68½	23½
Humble Oil & Refining Co.	25	57	56⅝	62¾	54	99⅝	52	99	42½
Illinois Pipe Line	100	147	*141	150	123¾	144	131	154½	122
Imperial Oil	..	42⅛	42¼	47	37⅝	39⅝	32½	39¼	27¼
Indiana Pipe Line	50	70½	66½	72½	61	68	52¼	84	87½
International Petroleum Co.	10	28⅝	28⅜	34⅞	28⅛	35½	28⅝	25⅝	22¼
National Transit Co.	12.50	*15	15⅜	17⅛	13⅝	30⅝	27⅛	25½	16⅜
New York Transit	100	*33	*33	36	31¼	51½	27¼	70	50
Northern Pipe Line	100	74½	*85	88	70	80½	64	88	67½
Ohio Oil Co.	25	*58	58⅝	64⅛	52	67⅝	55⅜	75¼	60
Penn-Mex Fuel	25	27½	27⅛	31	12	24¼	15	44	19
Prairie Oil & Gas	25	47⅜	47⅛	55½	45⅝	60¼	48	65½	45⅞
Prairie Pipe Line	100	*178	*180	185	132	137½	122½	129¾	105
Solar Refining Co.	100	*182	183	‡201½	185	212	184½	159	200
South Penn Oil	25	*35	*36	37½	34½	50	35	‡197	139
Southwest Pa. Pipe Line	100	*66	*65	77	55½	56	47½	84	50
Southern Pipe Line	50	*17	*17½	‡27¼	24	27	24	‡103	63
Standard of Indiana	25	66⅜	66⅞	74½	64¼	70½	60½	70¾	69¼
Standard of Kansas	25	*16	15⅝	20⅞	15⅝	36½	16½	46	30¼
Standard of Kentucky	25	112	112½	122¼	111⅝	134⅝	108	137	114⅝
Standard of Nebraska	25	44	44	49½	45	51⅛	42	‡270	231
Standard of Ohio, com.	100	*73	74½	‡354	294	362	192½	369	338
Swan & Finch, com.	25	*18	*18	17	15	21	18	27	12
Vacuum Oil	25	*133	132	134	96⅛	109⅝	94½	109½	80½
Miscellaneous									
Gulf Oil Corp of Pa.	25	91⅝	90⅛	96½	86¼	95	82½	98¼	63½

*Bid, no sales. ‡Old stock. †New stock.

The Oil and Gas Journal's weekly average price of 30 representative petroleum stocks listed on the New York Stock Exchange was as follows:

July 2	58.99	May 28	58.68	Apr. 25	57.03
June 27	58.99	May 23	57.89	Apr. 18	57.42
June 20	60.46	May 16	58.10	Apr. 11	57.37
June 13	59.91	May 9	58.08	Apr. 4	56.63
June 6	59.27	May 2	57.13	Mar. 28	58.51

PENNSYLVANIA MARKET

OIL CITY, Pa., July 2.—Gasoline and naphtha remained the same during the past week in the Pennsylvania refined market. There was not much of any change in either price or demand and conditions seemed to be about stabilized. The intense heat wave which has been prevailing over this section has had a beneficial effect on gasoline consumption and refiners are closely watching the reports of automobile traffic over the holiday. Neutrals continued very strong and in good demand. Wax showed some improvement with increased inquiries. Fuel oils were still weak. Kerosene showed no improvement and there was no demand for bright stocks.

GOING TO CONVENTION

CHICAGO, July 2.—About fifty of the local oil men have already signified their intention of joining the party that is being organized to attend the convention of the Michigan Independent Oil Men's Association. This convention is to be held at Mackinaw Island July 14 and 15 at the Grand Hotel. Last year the annual convention was very enjoyable. About one-half of those who have stated that they would attend with the Chicago group have made reservations to travel by boat. The S.S. "Manitou" will leave Chicago Monday evening, arriving at the island on Tuesday the day preceding the convention. Just in time, states Secretary Gilmore of the A. O. M. A., who is arranging for the trip, to have a good game of golf. The Grand Hotel golf course is one of the best in the West. The convention will take place on Wednesday and Thursday but the party who go by boat plan to remain until the end of the week making a week's outing of the attendance at the convention. Those who do not wish to take so much time away from their business—which will be very active about July 15, undoubtedly—will use the train, an overnight trip.

WILDCAT OPERATIONS IN PANHANDLE

(Continued from Page 40)

COTTLE COUNTY

Exploration Co.'s No. 1 Richards ..... Spudded.
Sun Oil Co.'s No. 1 Tom Burnett, C NW SE, Sec. 6, Blk. L, S. P. R. R. Sur. ..... S.D., 2,590 ft. for orders.

DALLAM COUNTY

James et al's No. 1 fee, Sec. 9, 47⅛ ..... S.D., 2,870 ft.
Wood Bros. et al's No. 1 Capitol Synd., Sec. 19, Blk. 17. U.R. 8¼-in. pipe, 3,000 ft.
Marland Oil Co. et al's No. 1 Capitol Synd., Sec. 36, Blk. 18, Capitol Synd. land ..... S.D., 950 ft.

DEAF SMITH COUNTY

Julian & DeGrace's No. 1 Mrs. R. A. Hindley, Sec. 47, Blk. K-8 ..... S.D., 520 ft. for casing.
Red Hill Oil Corp.'s No. 1 Barrett, Sec. 93, Blk. K-4 ... S.D., 710 ft.

DONLEY COUNTY

A. T. Drlg. Co.'s No. 1 F. E. Harington, Sec. 39, Blk. 3-C ..... 1,200 ft. water, 3,115-22 ft; show gas, 3,140-60 ft; dry granite wash, 3,260-93 ft; S.D., 3,498 ft. for water.

DICKENS COUNTY

Bowser Mickels et al's No. 1 Pitchford ranch, Sec. 1, Blk. 1, Sam Lazarus Sur. ..... S.D., 3,355 ft; corrected depth.

GRAY COUNTY

Atlantic O. P. Co.'s No. 1 Combs & Worley, NW cor. NE Sec. 39, Blk. 3 ..... Drlg., 2,440 ft.
Archer, Blake et al's No. 1 Turneau, Sec. 111, Blk. 2-B. Spudded and S.D.
Amos et al's No. 1 Crews, NW cor. Sec. 9, Blk. 25 ..... Show gas, 2,210-15 ft; 4,000,000 ft. gas, 2,270-75 ft; drlg., 2,497 ft.
Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B ..... Killed gas fishing for bit, 2,668 ft.
British-Amer. O. Co.'s No. 1 J. E. Meers, Sec. 107, Blk. 3. 58,000,000 ft. gas and slight spray oil; S.D., 3,190 ft; will possibly complete as gasser.
British American Oil Co.'s No. 1 J. M. Patton, Sec. 61, Blk. B-2 ..... Rigged and S.D; temp. abd.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 J. E. Williams, Sec. 17, Blk. 1 ..... S.D., 3,860 ft.
Donley Gray Oil Co.'s No. 1 J. W. Gordon ..... Rigging.
Jack Doyle's No. 1 D. W. Osborne, SE cor. Sec. 109, Blk. 3 ..... Rig.
Edwards et al's No. 1 E. J. Case, NE cor. Sec. 182, Blk. B-2, H. & G. N. Sur. ..... Set 20-in. pipe, 203 ft.
Empire G. & F. Co.'s No. 1 J. E. Cubine, NE cor. NW Sec. 36, Blk. 25 ..... 6,000,000 ft. gas, 2,342-60 ft; top granite wash, 2,397 ft; set 8-in. pipe, 2,472 ft; drlg. hard granite wash at 2,570 ft.
Empire G. & F. Co.'s No. 1 J. A. Hood, SW cor. SE Sec. 33, Blk. 3 ..... Drlg. red rock, 2,320 ft.
Empire G. & F. Co.'s No. 1 J. M. Saunders, SW cor. SE Sec. 4, Blk. 3 ..... 500,000 ft. of gas, 2,828-45 ft; fishing 2,845 ft.
Empire G. & F. Co.'s No. 1 J. F. Meers, NE cor. SE Sec. 107, Blk. 3 ..... T.D., 3,160 ft; steel line measurement, show fresh water; swabbed 50% water; swabbed down oil and water gone; drlg., 3,168 ft; 1,000 ft. oil in hole, fishing.
Empire G. & F. Co.'s No. 1 J. J. Wall, Sec. 161, Blk. 3. T.D., 2,930 ft; S.D; 43,000,000 ft. gas; closed in; to drill deeper.
Empire G. & F. Co.'s No. 1 Webb, SW cor. Sec. 59, Blk. 25; elev. 2,534 ft. ..... Preparing to shoot at 3,455 ft.
Lefors Pet. Co.'s No. 1 Leach, Lefors Townsite. ..... Rigging.
Gladis Gray's No. 1 Colebank-Morse (was Foster et al's No. 1 G. Cutebank), SW cor. NE Sec. 65, Blk. 25.... 2,905 ft., T.D; plugged back to 2,803 ft; shot 160 qts., 2,430-2,510 ft; 1,200 ft. oil in hole; bailed dry; shot with 600 qts., 2,479-2,525 ft; cleaning out, swabbing 35 bbls. daily.
Gulf Prod. Co.'s No. 1 Bowers, Sec. 89, Blk. B-2 ..... Drlg., 1,981 ft.
Gray County Pet. Co.'s No. 1 Herndon, Sec. 147, Blk. 3. 600 ft. water, 3,280-95 ft; fishing for bailer.
Gray County Pet. Co.'s No. 1 A Chapman ..... Spudding.
Neudigate et al's No. 1 A. Chapman, NE cor. E half SE Sec. 52, Blk. 25 ..... S.D., 1,835 ft. for 8¼-in. cas.
Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3.. Drlg., 1,100 ft.
Pampa Pet. Co.'s No. 1 Mary Leopold, Sec. 141, Blk. 3.. Water, 3,230-60 ft; slight oil show in granite wash, 3,572-75 ft; drlg., 3,600 ft.
Petroleum Explin. Co.'s No. 1 L. C. McConnell, SE cor. NW Sec. 174, Blk. 3 ..... Drlg., 1,010 ft.
Purple Sage Oil Co.'s No. 1 Johnson, Sec. 8, Rockwell County school land ..... First oil show, 2,645 ft; water, 2,-660 ft; show oil in granite wash, 2,790-95 ft; 8-in. casing set. 2,-803 ft; show gas, 2,814 ft; drlg. red rock and granite wash, 3,-040 ft.
Riley & Heck's No. 1 Mrs. Hopkins, Sec. 66, Blk. 2-B.... Show oil, 3,020 ft; dropped 6-in. casing in hole; drlg. by 11 joints 6-in.
Rensoul Pet. Co.'s (was Salisbury & Reynolds') No. 1 M. Huselby, C SE NE NE Sec. 55, Blk. 25, H. & G. N. Sur. ..... Flow, 30 bbls. daily from granite wash topped, 2,407 ft; trying to set 6-in. cas., 3,010 ft, corrected depth.
Roxana Pet. Corp.'s No. 1 Combs & Worley, NE cor. NW, Sec. 39, Blk. 3 ..... Underreaming 8-in. cas. at 2,150 ft.
Roxana Pet. Corp.'s No. 1 R. S. McConnell, NE cor. E half SW, Sec. 174, Blk. 3 ..... Drlg., 2,080 ft.
C. B. Shafer's No. 1 G. Cole, SE cor. W half SW Sec. 105, Blk. 3 ..... Fish. for pipe, 3,313 ft; 2,000 ft. oil in hole, S.D.
Sullivan et al's No. 1 fee, NW cor. E half SW, Sec. 1, Blk. 1, A. C. H. & B. Sur. ..... Cellar.
The Texas Company's No. 1 J. B. Barrett, NE cor. NW NW, Sec. 130, Blk. 3 ..... 2,000,000 ft. gas, 3,115-20 ft; 6-in. set at 3,135 ft.
J. Williams et al's No. 1 C. W. Bradford, Sec. 123, Blk. B-2 ..... Rig temporarily abd.

HALE COUNTY

Exploration Co. No. 1 Crawford, Cen. NE, Sec. 17, Blk. C-3, T. T. R. R. Sur. ..... Location.
Engleking Drlg. Co.'s No. 1 Mulligan, C Sec. 21, Blk. B, R. M. Thompson Sur. ..... 150 fluid in hole from 407-12 ft., S.D.

HALL COUNTY

Seifert et al's No. 1 Owens, C NE Sec. 179, Blk. S-5, Dennison & Pacific Sur. ..... Spudded and S.D.

HOCKLEY COUNTY

El Capitan Oil Co.'s No. 1 Ellwood, SW cor. Sec. 55, Blk. A, R. M. Thompson Sur., 18 mi. NW Lubbock.. Drlg., 1,350 ft; (no report).
World Oil Co.'s No. 1 Ellwood, Sec. 6, Wilbarger County school land ..... U.R. 10-in. pipe to 1,400 ft.

HARTLEY COUNTY

Deep Rock Oil Co.'s No. 1 Lymann & Balfour, Sec. 9, Blk. 2 ..... Show gas and rainbow of oil, 1,-560 ft; top lime 2,810 ft. 3,-000 ft. of gas.
Eslick et al's No. 1 J. B. Irving, Sec. 13, Blk. 13 ..... Topped granite wash, 3,108 ft; show oil, 3,226 ft; drlg., 3,300 ft.
J. E. McKanna's No. 1 Frances Farwell, Sec. 30, Blk. 22. Run. 6-in. casing to 2,990 ft.
J. E. McKanna's No. 1 J. M. Shelton est., Sec. 29, Blk. 203 ..... S.D., 3,595 ft; cas. trouble; rig blown down; rebuilding rig.

HEMPHILL COUNTY

Hoover et al's No. 1 Schaller est., Sec. 4 ..... Spudded and S.D.
Hoover et al's No. 1 fee, J. S. Hood Sur. ..... Drlg., 4,550 ft.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 1 Ida Ingerton ..... 70,000,000 ft. of gas 2,400 to 2,-610 ft., killing gas.
Anderson & Pritchard's No. 2 William Yake, SW cor. NW, Sec. 1, Blk. J, H. & G. N. Sur. half mile W of No. 1 ..... Rigged.
R. G. Barnum et al's No. 1 Garland Sanford, Sec. 78, Blk. 46 ..... Rig.
Beam et al's No. 1 Cockrell, Sec. 3, Blk. 23 ..... S.D., 405 ft. for orders.
Berryman Oil Co.'s No. 1 Sanford, Sec. 33, Blk. 46, H. & T. C. Sur. ..... 80,000,000 ft. gas, 2,690-2,905 ft; show oil, 2,915 ft; show oil 3,-030-39 ft; S.D., 3,060 ft.
Big Coach Oil Co.'s No. 1 Dunnaway, Sec. 5, Blk. Y .... S.D., 750 ft.
Conklin et al's No. 1 Johnson, Sec. 1, Blk. XO3, H. & O. B. Sur. ..... S.D. 600 ft. for 12-in.
Great Plains Oil Co.'s No. 1 Bivins, Sec. 13, Blk. Y2, T. T. R. R. Sur. ..... 60,000,000 ft. gas, 2,540-60 ft; running 6-in. casing to 2,750 ft.
Great Plains Oil Co.'s No. 1 Kingsland, Sec. 4, Blk. Y .. S.D., 2,345 ft.
Golden Eagle Oil Corp.'s No. 1 J. Q. Bost, Sec. 6, Blk. Y-2 ..... Derrick.
McMan O. & G. Co.'s No. 1 Albert Yake ..... Drlg., 980 ft.
Marland Oil Co.'s No. 1 Carver, Wm. Heath Sur. ..... S. D., 3,810-30 ft; 710 ft. water, P. B. to complete as a gas well around 3,260 ft.
Panfield Oil Co.'s No. 1 Luginbyhl Bros., Sec. 50, Blk. M-23 ..... S.D., 1,200 ft.
Pole Cat Oil Co.'s No. 1 W. B. Halle, Sec. 24, Blk. M-21.. Drlg., 2,550 ft.
Phillips Pet. Co.'s No. 1 Yake, Sec. 36, Blk. 46 ..... Topped pay, 2,820-50 ft; 1,800 ft. oil in hole; drilled to 2,856 ft., P. B. to 2,852 ft. swabbed 17 bbls.
Phillips Pet. Co.'s No. 12 Elva-Whittenburg, E. Tomlinson Sur. ..... Drlg. to 3,750 ft; 1 ft. in granite.
Prairie O. & G. Co.'s No. 1 J. M. Sanford, SW cor. N half Sec. 85, Blk. 46 ..... Drlg., 2,510 ft.
Prairie O. & G. Co. and Vacuum Oil Co.'s No. 1 Cal Merchant ..... Drowning out 75,000,000 ft. gas, 2,252-2,740 ft; drlg. by tools at 2,550 ft.
Skyrocket Oil Co.'s No. 1 Mrs. R. A. Jameson ..... Run. cas. by tools, 2,515 ft., running 8¼-in., 2,550 ft.
Sweeney et al's No. 1 Johnson, Sec. 38, Blk. Y ..... S.D., 1,780 ft.
U. S. Oil Corp.'s No. 1 Johnson, Sec. 35, Blk. Y ..... Drlg., 2,250 ft., making 40,000,-000 ft. of gas, 2,140-2,250 ft.
Vitek Oil Co.'s No. 1 W. F. Allen, Jose Rodriguez Sur. .. S.D., 180 ft.

KING COUNTY

Gibson & Johnson's No. 1 Burnett est. ..... Salt water, 2,525-50 ft; run. 8-in. to 2,576 ft; drlg., 2,605 ft.
Midwest's No. 1 Patton ..... Drlg., 2,375 ft.
J. L. Pattison's No. 1 Patton ..... S.D., 2,065 ft.
Phillips Petroleum's No. 1 ..... Drlg., 3,220 ft.
Sinclair ..... T.D., 2,320 ft.
White Eagle's No. 1 ..... S.D., 2,640 ft. for 8-in. shoe.

LIPSCOMB COUNTY

Cal-Tex's No. 1 Bradford, C NE NE Sec. 899, Blk. 43, H. & T. C. Sur. ..... Spudded and S. D.
Camp Creek Oil Co.'s No. 1 Mrs. H. D. May, Sec. 612, Blk. 43 ..... S.D., 600 ft.
McCorkle's No. 1 A. Barton, NE cor. SW SE, Sec. 504, Blk. 43, H. & T. C. Sur. ..... Set 6-in. 3,811 ft., drlg. 3,840 ft.
Ozark Drlg. Co.'s No. 1 Frass, NE SE Sec. 106, Blk. 10, H. & T. C. Sur. ..... Rig on ground.
Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW, Sec. 100, Blk. 43 ..... Drlg., 3,350 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 2 Terry Thompson, Sec. 19, Blk. 44. Making 34,000,000 ft. gas; lime, 3,425 ft; killing gas.
Douglas Oil Co.'s No. 1 H. M. Beauchamp, Sec. 112, Blk. 44 ..... 12,000,000 ft. gas, 3,425 ft; 6-in. cas. set, 3,470 ft; drlg., 3,905 ft. in hard lime.
Marland Oil Co.'s No. 1 J. T. Sneed, Jr., Sec. 25, Blk. 1. Half bailer water per hr., 3,152-3,202 ft; plug. back for gas.
Moore County Oil Co.'s No. 1 Sneed, Sec. 30, Blk. 6-T .. Drlg., 2,705 ft., very slight gas show.
Shadler Bros.' No. 1 John Lowery, Sec. 237, Blk. 44 .... Drlg., quick sand 1,650 ft.
Skelly Oil Co.'s No. 1 Armstrong & Byrd ..... Cemented 12-in. pipe at 1,370 ft; drlg. out cement.
Prairie and Shamrock's No. 2 Gober, Sec. 16, Blk. M-21 Fish. bit, 265 ft.

MOTLEY COUNTY

Chechako Oil Co.'s (J. W. Pennington et al of Amarillo) No. 1 J. W. Owens, NW cor. Sec. 26, Blk. 4 (15,000-acre solid block) ..... Drlg., 3,130 ft.
Exploration Co.'s No. 1 Burleson ..... Spudded.
Exploration Co.'s No. 1 Tillson ..... S.D., 750 ft. for repairs.
Exploration Co.'s No. 1 Matador Land & Cattle Co. Cen. SW, Sec. 27, John Gibson Sur. ..... Location.
Wheeler et al's No. 1 C. D. Bird, C NE Sec. 4, Blk. S. Stephens Sur. ..... Spudded and S. D.

OCHILTREE COUNTY

W. G. Burton's No. 1 Stickler, Sec. 579, Blk. 43 ..... Run, 5 3/16-in. cas., 3,821 ft., bailing water 3,870 ft.
Hamilton et al's No. 1 R. E. Wamble, Sec. 144, Blk. 43. S.D., 250 ft.
McCorkle Pipe Line Co.'s No. 1 R. H. Moore, Sec. 471, Blk. 43 ..... S.D., 1,600 ft.
McCorkle's No. 1 Weinett, Sec. 674, Blk. 43 ..... Drlg., 560 ft.
Standard Dev. Co.'s No. 1 Bowden, Sec. 923, Blk. 43 .... S.D., 900 ft.

OLDHAM COUNTY

Prairie O. & G. Co.'s No. 1 Landergin, SE cor. NE SW Sec. 46, League 310, Capital land ..... Drlg. up bailer, 3,720 ft.

PARMER COUNTY

Humble O. & R. Co.'s No. 1 Farwell; elev. 4,005 ft. .... Temp. abd., 3,600 ft.

POTTER COUNTY

Amarillo Oil Co.'s No. 1 Masteron, Sec. 69, Blk. O-18, D. & P. Sur. ..... Building rig.
Amarillo Oil Co.'s No. 1-B Masterson, Sec. 43, Blk. G-M-3, G. & M. Sur. ..... Location.
Del Rio Oil Co.'s No. 1 River Bed, Sec. 106, Blk. 46, H. & T. C. Sur. ..... Rig.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A ..... Show gas, 4,990 ft; show oil, 4,-992 ft; preparing to run 3-in. cas.
Dunbar's No. 1 H. A. Gill, Sec. 127, Blk. M-2 ..... Cellar; temporarily abd.
Murphy et al's No. 1 Gill, Sec. 31, Blk. M-2 ..... S.D., 650 ft.
Charles Page et al's No. 1 Hamilton, Tract 2, Clay County school land ..... S.D., 440 ft.
C. C. Wilson, No. 1 A. H. Tandy, NE cor. Sec. 182, Blk. 42, H. & T. C. Sur. ..... Spudding.

SHERMAN COUNTY

Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B ..... Fish., 1,385 ft.
Hagy & Harrington's No. 1 S. F. Flores, C SW Sec. 64, Blk. 3-T, T. & N. O. Sur. ..... Set. 15½-in. at 557 ft; drlg., 830 red sand.
Phillips Pet. Co.'s No. 1 Price & Fuqua, C NE, Sec. 33, Blk. 2-B, G. H. & H. Sur. ..... Drlg., 350 ft.
Whitehead et al's No. 1 Lee Bivins, C SW Sec. 86, Blk. 2, G. H. & H. Sur. ..... Location.

SWISHER COUNTY

R. H. Miller's No. 1 Todd ..... Loc. temporarily abd.

WHEELER COUNTY

American Ref. Co.'s No. 1 E. E. Carlton, Sec. 29, Blk. 13 8,000,000 ft. gas; show oil, 2,027 ft; T.D., 2,255 ft; plugging back to shoot.
Angus et al's No. 1 G. A. Morgan, SW cor. SW NE Sec. 93, Blk, 17 ..... Making 24,000,000 ft. gas, 1,800-95 ft; S.D., 1,895 ft.
Angus et al's No. 1 Vermillion, SW cor. NW SW, Sec. 80, Blk. 17, H. & G. N. Sur. ..... Drlg., 300 ft.
Boyles & Johnson's No. 1 S. L. Lewis, Sec. 40, Blk. 24. Fish. for bit, 2,400 ft.
Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. ..... Spudded and S.D.
Marland Oil Co.'s No. 2 W. E. Bentley ..... Show gas, 2,205 ft; S.D. by agreement.
J. J. Rook's No. 1 M. Mertel, SE NE Sec. 4, Blk. 24, H. & G. N. Sur. ..... Making 40,000,000 ft. gas; fish., 1,985 ft.
J. J. Rook Co.'s No. 1 T. C. Jones, Sec. 1, Blk. 34 ..... Fish. casing, 1,300 ft.
J. J. Rook's No. 1 C. W. Porter, SW cor. NW Sec. 41, Blk. 24 ..... S.D., 2,300 ft. by agreement.
Wheeler O. & G. Co.'s No. 1 P. J. Sorenson, Sec. 53, Blk. A-4 ..... Spudded and S.D.

Smith Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. 4-A	S.D., 2,112 ft, for orders, preparing to resume drilling.
E. L. Woodley, Jr.'s No. 1 Woodley, Sr., Sec. 13, Blk. 5-A. Watchorn O. & G. Co.'s No. 1 F. E. Shelton, C NE NE Sec. 22, Blk. 24	Show oil, 2,227 ft; S.D. 2,349 ft. Gas at 2,007 ft; 200,000,000 ft. mudded off S.D., 2,075 ft. for pipe.
The Texas Company's No. 1 Bell, Sec. 71, Blk. 13, H. & G. N. Sur.	Drlg., 920 ft.
The Texas Company's No. 1 B. P. Sewell	47,000,000 ft. gas, 1,855 ft; caught fire, rebuilding rig.
Tidal Oil Co.'s No. 1 W. E. Bentley	Drlg., 1,500 ft; oil in hole from granite wash at 2,299-2,307 ft; drlg. ahead.

VENEZUELA MAY HAVE MILLION BARRELS DAILY

(Continued from Page 30)

cepcion, the latter two fields west of Lake Maracaibo. Also, it operates the properties of the V. O. C. at La Rosa, Ambrosia, La Benitez, and Lagunillas on the east side of the lake, and also the property of the Colon Development Co. in the District of Colon, southwest of the lake.

Operating Companies

The Caribbean Petroleum Co. thus operates, without competition, the entire fields of Mene Grande, La Paz, La Concepcion, Rio de Oro, and La Tarra, and operates all of the land production at La Rosa, Ambrosia, La Benitez and Lagunillas. The Venezuelan-Gulf Oil Co., a subsidiary of the Gulf Oil Corp. of the United States, and the Lago Oil & Transport Co., a subsidiary of the Pan American Petroleum & Transport Co., are operating in competition with the Caribbean in these latter four fields; the Gulf and Lago production being from wells drilled along the shore line of the lake, but in the waters of the lake.

The British Controlled Oilfields, Ltd., own the entire El Mene Field, which field is in the State of Falcon, and is the only field producing oil in Venezuela not located in the State of Zulia.

The holdings owned and operated by the Caribbean Petroleum Company produce and ship not only more than 50 per cent of the entire oil production of the country, and have on them more than 50 per cent of the developed production, much of which is closed in, but have developed fields that will easily permit them to continue this ranking production if they desire so to do.

Unequalled Holdings

In the writer's judgment, there never has been, within the history of the oil industry, any producing property controlled by a single company which equals these holdings operated by the Caribbean Petroleum Co., judging by their present known developments. There may be properties equally good among the large holdings of other Venezuelan companies, or elsewhere, but their full worth has not been developed. The Standard Oil Co. of New Jersey has, in the International Petroleum Co.'s property in Colombia a developed production of great possibilities. The Lago company and the Gulf company, on the properties of the Creole Syndicate, the Venezuelan Petroleum Co., and others, each have splendid developed properties in the lake and a large amount of known additional drilling that will be productive. The Standard of Venezuela (Standard of New Jersey), the Richmond Oil Co. (Standard of California), the Beacon Sun Co. (Sun Oil Co. of Philadelphia and Beacon Oil Co. of Boston), the Orinoco Oil Co. (Pure Oil Co.), the Atlantic Oil Co. of Venezuela (Atlantic Refining Co. of Philadelphia), the Union Oil Co. of California, and the Pantepec Oil Co. have large holdings of concessions amounting to millions of acres, and are spending large sums of money in engineering and geological work and in drilling.

Outside Discovery

The Richmond-Beacon Sun have made what seems to be the most important discovery outside of the known fields, in their well in the State of Falcon. A well drilled by these companies in 1926 showed a production at the rate estimated from 500 to 2,000 bbls. a day, with 15,000,000 to 20,000,000 feet of gas. The gas became ignited, and the well was lost before the full value of the discovery could be known. A second well is being drilled, and should be completed during the early summer of 1927.

This development of the Richmond-Beacon Sun companies is near the north shore of Venezuela, only 10 miles from the Caribbean Sea and only 25 miles from Coro, the landing place of Columbus.

Another important recent development is the "Acosta Field" in the District of Acosta, over which district the North Venezuelan Petroleum Co. has a blanket concession. This company has had some oil in its first two wells drilled, at from 1,400 to 1,500 feet, and are drilling two additional wells.

The companies already named, and others not actively operating, have vast holdings throughout the north half of the entire country of Venezuela, and some even south of the mountains, as is a part of the large concession of the Sinclair company, all of which have many of the distinguishing conditions which indicate the possibility of oil production, such as oil seepages, structures, and regional locations with reference to known oil production, all of which, taken together with the present developed areas of production, make Venezuela a real potent factor with relation to the world's supply, not only of today but of the future.

Present Development

It is difficult to give an accurate estimate of what the production of the country would be if it were all opened up at this time, or of what it could be brought up to by intensive drilling, if conditions justified, within a given time.

In the fields controlled entirely by the Caribbean company—Mene Grande, La Paz, La Concepcion, Rio de Oro, and La Tarra—the drilling has been confined largely to informational testing and with the thought of developing known reserves, and the production has to a large degree been closed in. At La Rosa, Ambrosia, and Lagunillas, drilling has been intensive, but only line drilling, and a merry race for production is being waged between the Caribbean, the Gulf, and the Lago companies, although the shipping and storage facilities compel the shutting in of a large part of their production from these fields.

A brief history of the present developed oil fields of Venezuela is as follows:

Mene Grande

Mene Grande is located about 15 miles east of the east shore of Lake Maracaibo, 9 degrees 45 minutes north of the equator, in the State of Zulia, District of Sucre. The first oil well was completed at Mene Grande on July 31, 1914. The production is found at varying depths from 200 to over 3,000 feet. Ninety-six wells have been drilled, only six of which are recorded as dry or abandoned. There is a potential production from wells already completed of 40,000 to 45,000 bbls. per day, but only 15,000 to 20,000 bbls. is being shipped on account of lack of storage and shipping facilities. Mene Grande is susceptible to a much greater production. It is owned entirely by the Caribbean Petroleum Co. Oil is run from this field by pipe line to San Lorenzo, at which point the same company operates a small refinery for supplying the local Venezuelan trade. The greater portion of this crude is shipped to Curacao Island, at which point the Dutch Shell Co. has a large refinery, the largest in the tropics.

La Tarra and Rio de Oro

The La Tarra and Rio de Oro Fields are on the property of the Colon Development Co. La Tarra is located 125 miles southwest of the south end of Lake Maracaibo, and the Rio de Oro 65 miles northwest of La Tarra. These fields are operated by the Caribbean Petroleum Co. No oil is being taken out, as no transportation facilities have been installed. Complete information of these operations has not been obtainable. Some steel storage tanks have been built, and about 22 wells drilled, with 5 dry holes. Production figures are not available. The first production was had on May 3, 1918. The wells range from 575 to 3,800 feet in depth. These fields are at present only reserves.

La Concepcion and La Paz

The La Concepcion and La Paz Fields are located west of the city of Maracaibo, on the west side of the lake, about 40 miles to La Concepcion and 60 miles to La Paz. Both are operated by the Caribbean company and both are the property of the Venezuelan Oil Concessions, Ltd. The first wells were completed at La Paz on December 17, 1922, and at La Concepcion on May 28, 1925. The two fields are producing about 4,500 bbls. daily from a total of 70 drilled wells, 22 of which have been dry or abandoned.

What this present development might produce, or what additional drilling will be profitable, is not generally known; probably both the production could be increased and a large amount of additional drilling will be justified. There is no competition in these fields, and they will be held largely as reserves. The depths of the wells at La Concepcion and at La Paz range from 550 feet to 3,200 feet.

El Mene

The El Mene Field is located across the north end of the lake and almost due east, about 70 miles, from the city of Maracaibo. It is in the District of Buchivacoa, State of Falcon, and is the only producing oil field in Venezuela outside of the State of Zulia. This field is owned and operated by the British Controlled Oilfields, Ltd.

The first oil well in El Mene was completed December 13, 1923. There have been 149 wells drilled, 45 of which were either dry or have been abandoned. El Mene is producing about 8,000 bbls. of oil per day, which oil is all sold to the Caribbean company, and all of which is being run. Production in this field is hade at from 675 feet to 1,500 feet. Deeper drilling has produced no oil.

Great Producing Fields.

The present great producing fields in Venezuela are the La Rosa and the Lagunillas Fields.

The Ambrosia Field is but a north extension of the La Rosa Field, about 1 mile distant, and will probably connect up with the La Rosa. La Benitez is probably a similar extension to the south, about 3 miles from La Rosa, and will also probably connect up. Hence, La Rosa, Ambrosia, and La Benitez may well be treated as a single field and are in this description.

The La Rosa Field had its first producing well completed by the Venezuelan Oil Concessions, Ltd., September 4, 1916. On March 1, 1927, there had been completed in this La Rosa area about 275 wells, about 38 of which have either been dry or for some other reason have since been abandoned. The La Rosa Field has (on March 1, 1927) a developed production of probably 125,000 bbls. per day, but is closed in to about 70,000 bbls. There is much undrilled territory certain of production.

Oil is found in the La Rosa District at from 1,350 to 3,150 feet in depth. Wells are usually completed at from 2,000 to 3,150 feet.

La Rosa is on the east shore of Lake Maracaibo, and about 50 miles southeast and across the lake from Maracaibo city.

La Rosa is the first field where competitive operations are found, which in part accounts for its rapid development. The Caribbean Petroleum Co. (operating the V. O. C.), the Gulf company, and the Lago company are the only producing companies.

Lagunillas

The same competitive conditions, with the same companies operating, are had at Lagunillas. This field is also on the east shore of the lake and is located about 37 miles southeast of La Rosa.

At Lagunillas the first well was completed by the Gulf company of Venezuela May 15, 1926. Since that date and up to March 1 about 15 wells have been completed and an estimate production of from 60,000 to 80,000 bbls. per day has been opened up. Less than one-half of this production is taken from the wells on account of the lack of storage and from limited transportation facilities.

Lagunillas looms up as the greatest producing oil field yet developed in Venezuela. Oil is found at from 3,150 to 3,400 feet.

The Caribbean, the Gulf, and the Lago companies each has a large amount of proven but undrilled acreage, the full extent of which will not be known until more drilling has been completed.

There were on March 1 of this year 50 wells listed as drilling in Venezuela, about 35 of which are in the proven areas. Drilling has been closed down very considerably from that of the two months previous.

Development of Exports

From 1914 to January 1, 1926, the exports of oil from Venezuela were 34,317,162 bbls. In 1926 the exports were 33,473,677 bbls. The estimated exports for 1927 are about 45,000,000 to 50,000,000 bbls., being limted to the present transportation facilities plus the additional boats that will be available for the latter part of the year.

The Gulf company transports its oil in lake tankers to a terminal on the west shore of the Paraguana Peninsula. The Lago company, via the same method, transport its oil to the Island of Aruba, and the Caribbean company to the Island of Curacao.

These lake vessels carry from 13,000 to 17,000 bbls. each and make the return trip in from two to four days, depending on which of the above ports the oil is delivered to, and also on the tide conditions. There are a total of about 32 of these tankers in this service. This fleet will be increased to about 50 before the end of 1927.

The storage of crude oil in the fields has not been the practice of these companies except in a very limited way. There are now estimated to be 2,000,000 bbls. of crude oil in steel storage in Venezuela, and about 6,000,000 bbls. of additional storage building and contracted for. All of this new storage may be completed and will be filled before the end of the year, and the production as estimated by exports will be increased by this addition.

There are also two small refineries, one at San Lorenzo operated by the Caribbean company, and one at La Rosa operated by the Lago company. The total consumption of these refineries, not over 5,000 bbls. daily, will increase the possible production for the year by from 1,500,000 to 2,000,000 bbls.

Effect on Markets

As it now looks, the effect of Venezuela on the markets of the United States during 1927 will not be greatly changed from the conditions of the past year, but with each succeeding year, as the fields are further developed and as transportation facilities are increased, Venezuela will be an increasing factor to be seriously considered.

Venezuelan oil shipped to the United States takes no additional time, travels no farther, and will cost but little if any more for transportation than does the oil moved from Port Arthur, Tex., to our eastern refineries.

The costs of production will not greatly exceed those of the United States, judging from the present developed fields. La Rosa wells, 3,000 feet deep, cost, completed, from $32,000 to $37,000. Those at Lagunillas, from 3,150 to 3,400 feet deep, cost from $40,000 to $45,000. These costs are based on field operations and with costs of camp and other equipment spread over a number of wells. First costs, wildcatting, etc., are exceptionally high.

The oil produced in Venezuela will run from 18 degrees Baume gravity at Lagunillas and part of Mene Grande to 37 degrees Baume gravity in La Paz. El Mene oil is about 30 degrees Baume. All of the Venezuelan oil carries a fair percentage of gasoline from first distillations and also responds well to the cracking process.

Possible Development

Just how rapidly the two developed competing fields will be further drilled

will depend on the Caribbean, the Gulf, and the Lago companies, which companies control the situation entirely. These companies have competing drilling lines and unlimited resources, cannot only increase the present production from apparently proven area, and probably double it or treble it, but they can do what would affect the United States production more, namely, rapidly increase their transportation facilities.

Will they do this and to what extent, or will they agree that a more orderly development of their drilling can be done at a less cost and affect their large producing interests elsewhere less harmfully? That either of these three can get any advantage over the others from more intensive drilling is hardly probable.

In addition to the producing and operating companies already named, there are other companies holding some valuable concessions. Some of these are being operated by the Gulf and Lago companies, or are being prospected on. The Maracaibo Oil Co., the Venezuelan Petroleum Co., the Pantapec Oil Co., the Creole Syndicate, the Carib Syndicate, all come within the latter class. The largest lease holdings are those of the Company of Venezuela, which company handles all of the national reserves, the holdings returned to the Government by the original concessionaires, who must release to the Government at least 50 per cent of the original concessions.

Lake Drilling

There has been much discussion as to the lake drilling. The Gulf company has a strip extending along the east side of Lake Maracaibo, varying from 1,600 to 3,300 feet in width, all of which is in the waters of the lake. In this it has its La Rosa and Lagunillas production.

The Lago company has a narrower strip in places along the east side of the lake between the Gulf's strips and the shore line. However, the Lago company's big opportunity would seem to be in the area outside of the Gulf's strips or parcels, and comprising the entire body of the lake, excepting these shore line parcels. This company has its production, both at La Rosa and Lagunillas, from both of these areas. The Lago company has in the lake, as the Caribbean company has on the land, vast areas of possible production, none of which would have any unsurmountable obstacles of drilling or operating.

The use of concrete piling for foundation purposes, even in the lake at its greatest depth of 50 or 60 feet, will be only relatively more expensive than at present where they are conducting operations in water at from 4 to 20-foot depths.

Tribute to Pioneers

The operations in the Maracaibo Basin from their inception, with the engineering and geological work, to the field operations on land and on water, have required a high class of men of ability, of resourcefulness and of character. Such men are in control of the situation, and are making a great success of a difficult job. The engineers and geologists were the pioneers, many of them without any knowledge of the Spanish language, had to enter and explore a jungle country with no roads. Many of the inhabitants had never seen anyone other than their own people. They had to meet and learn to conquer the fevers and other diseases of a tropical country. Later came the road makers, the transportation men and the drillers, all working with equipment not always suited to the work, improvising, substituting and creating the thing or tool necessary. These still have many difficulties to overcome. With but a few exceptions, all of these men are of a high type and character and would be a credit to any organization or people.

The lake drilling has brought on new operating conditions. Piling must be used for foundations for derricks, for standard rigs, for boiler setting and for other equipment. Motor boats, bungos, scows, sails and any other character of water craft that can be found are pressed into service for supplying transportation to and from these lake locations.

Modern Noah's Ark

The Gulf company has followed the precedent of the most ancient of biblical craft at its Lagunillas operations. Noah and his ark furnished the inspiration of their camp at that place. K. W. Winship, the agent and general manager of the Gulf company, has probably surpassed Noah in the conveniences and equipment of the ark "Winship." This modern ark is 200 feet long, 40-foot beam, has shower baths, toilets, a clubroom, dining hall and dormitory rooms for 50 men. It is clean, sanitary, has its own electric light, Frigidaire and laundry, and is anchored off the jungle shore and swamps, far enough away to be free from mosquitoes and from shore temptations. It is a safe bet that Father Noah gave no such comforts to his guests.

The possibilities of lake production at many different points, for the Gulf company, makes such a camp of additional value. It can take care of peak loads while development is intensive and can move on quickly to other fields (waters) with little if any disturbance in moving, and carry its tenants with it. The Lago company's vastly greater lake holdings, and their liability to operations located at long distances from shore would seem to make these "Ark" camps a necessity to this company.

"Admiral" Winship of the Gulf and "Admiral" James Stewart of the Lago are possibilities of the near future. Winship, a newly wedded man, will probably insist on shore duty. Admirals Noah, Columbus, Winship and Stewart, if they are fortunate enough to meet on the "Styx," will no doubt have many heated debates, between drinks, over the relative merits of their fleets.

Advice on Employment

Americans going to Venezuela expecting to engage with the oil companies there should only do so after first getting in touch with the employment manager of the company in the States, otherwise they will probably be greatly disappointed and without opportunity of employment when they arrive. Each company has its employment organization in the States, and this is fully advised as to the need for men, the qualifications necessary, and can give the fullest advice and direction to the applicant. No one not in good physical condition should go to the tropics. No one except men skilled in the oil field work in some of its branches should go, and only for some of these jobs is there generally a constant demand.

The trip is made either from New York, or from Key West or New Orleans. If from New York, the Red "D" Line is the only one carrying passengers to Venezuelan ports without change. Other lines, either via New York, Key West or New Orleans, will usually go via the Canal Zone and tranship there to a French, Dutch, Spanish or Italian line boat to Curacao, and thence again by such boat as may be next available to Maracaibo.

The trip offers many interesting opportunities to study Spanish American ports and peoples. If one touches at San Juan, Porto Rico, or at the Canal Zone, there will be seen not only the native Spanish conditions but the modern American development and the influence of the latter on the former cannot in either case but inspire a feeling of satisfaction in the breast of the United States citizen traveler. This contrast is most remarkably demonstrated in the Canal Zone.

Port of Curacao

All travelers in the Caribbean will sooner or later pass through Curacao. This is an almost barren Dutch island lying about 60 miles north of the coast of South America, about midway en route from La Guayra to Maracaibo. Its principal city and port is Wilhelmstaat, although this is generally spoken of as Curacao. In reaching this port, one first sees only a low arid, sand covered waste of land, until suddenly there looms ahead a narrow neck of water extending inland, surrounded on both sides by masses of bright colored buildings of from one to four stories in height, all covered with red-tiled roofs.

This inlet is the entrance to the harbor of Curacao, one of the few natural harbors of the Caribbean. The entrance, as well as the harbor into which it leads, has a depth of from 150 to 300 feet and no dredging or other work to keep it open to navigation of any kind is required. Stretching across this inlet is a pontoon bridge, which opens and closes for the passage of ships by a steam motor power located on the end pontoon. It is a curious sight to see this bridge, with hundreds of pedestrians, opening and shutting like a jack-knife. The toll for crossing is one Dutch cent, but if one considers this too expensive, it is only necessary to take off one's shoes and cross barefooted, no charge being made for barefooted travelers. The Curacao bridge is famous the world over, and is a great curiosity.

Curacao is the trading center of the Caribbean. Boats from the four points of the compass sailing the Caribbean all touch at Curacao for taking on or discharging cargo. It is a great transhipping port. It is a free port, and has greatly benefited on account of the oil development of Venezuela, being the transhipping point for passengers and for all kinds of supplies. Curacao, while a Dutch port under the Dutch crown, has probably less of Dutch than it has of several other nationalities, such as Spanish, Jews, negroes, Trinidadians, Portuguese, Venezuelans and Assyrians. It is quite international in character and has a language peculiarly its own called "Papiamento."

Has Its Own Language

Papiamento is the "Brunswick stew" of languages and the despair of the linguist not versed in its peculiar makeup. It is a mixture of Spanish, English, French, Dutch, Portuguese, negro, Latin and Hebrew. It is said to be spoken no where else in the world except at Curacao and in one or two of the near-by islands.

It is at this port the Royal Dutch Shell Co. has its large refinery, to which its carries its oil from Venezuela in shallow tankers and from which it distributes to its world markets.

Peter Stuyvesant, with his one leg, later Dutch governor of New York in the colonial days, had previously been the Dutch governor of Curacao and had learned the secret of the value of this barren island as a trading port. Stuyvesant's particular graft lay in the slave market, which he made famous and found very profitable.

There are two principal cities in Venezuela: Caracas, the capital, which lies 3,000 feet above the sea, is the largest city and also the social center of the country; Maracaibo, almost as large as Caracas, is a port city, located on the northwest shore of Lake Maracaibo.

Caracas is reached through the port of La Guayra. It is located up the mountains about 5 miles from the sea, but is reached by rail or road over a 25-mile circuitous, hill-climbing route famous for its scenic beauty. Caracas is always featured as a stopping point for all Caribbean tourist parties.

La Guayra figures in romantic literature in Charles Kingsley's "Westward Ho!" and in the books of Richard Harding Davis. Davis has also featured Puerto Cabello, another port and city west of La Guayra, in his "White Mice." Maracaibo is prominent in Sabatini's "Captain Blood" and in the works of several other writers of adventure.

Both the tourist and those interested in oil, about to travel the Caribbean or visit or live in Venezuela, will be interested in reading some of these romances of their route.

Maracaibo and Caracas are both cities of about 100,000 to 125,000 people.

Climate and Health

The temperature in Caracas will vary the year around not over 2 to 4 degrees Fahrenheit from 72 degrees, and will range from 70 to 85 degrees at Maracaibo. It is never excessively hot, but, particularly at Maracaibo, there is much humidity; and as to the heat, it is continuous for 12 months, although the nights are cool and pleasant during the winter season (December to March, inclusive).

Health conditions are to a large extent affected by the individual precautions taken. The avoiding of mosquitoes which spread the malaria is the greatest health problem; care in eating and in drinking are also necessary. Fresh vegetables and fruits in sufficient quantities are difficult to get. Fish and meats, while plentiful, are not always of the choicest or most appetizing. These conditions are being improved daily. The oil companies furnish free medical and hospital services to their employes. They have rest camps and clubrooms with literature and games —all of which assist in keeping up the morale and in improving the living conditions.

Both at Caracas and at Maracaibo there is a golf course, which furnishes not only a community of interest between the natives and the American and other foreign inhabitants, but a method of social relaxation and enjoyment. Open air dances are given at these clubs, usually twice a week.

Ideal Golf Course

The Maracaibo golf course is worthy of a full page in the "Golfer" magazine. It has greater possibilities and less of realization for perfect scoring than any other course I have ever seen. The Adonis of the course is Walter G. Fitzpatrick, representative of the National Supply Co., but the real player is "Admiral" Winship, the "Bobby Jones" of Venezuela. He admits all of it. The president of this club is Alexander K. Sloane, the American consul.

Speaking of consuls, if the United States were always represented at its foreign posts by men of the ability and character of Alexander K. Sloane, there would be no occasion for complaint by our citizens in the foreign countries, and our relation with these people would be of the most cordial character. Consul Sloane is the ideal diplomat—genial and obliging, but firm when required; he is deserving of the highest confidence of his government.

Venezuela is a republic—with a national president—and a governor, called president, for each of its 20 states.

Venezuela takes its name—meaning "Little Venice"— from the native villages along Lake Maracaibo, which were built out over the water on piling. Some of these still exist. The Lagunillas oil field is located immediately at and surrounds the village of Lagunillas, which has about 250 houses built on stilts. These houses have thatched roofs, and are separated by streets about 25 feet in width, with a board walk down the center which is from 12 inches to 36 inches in width; the houses being built in solid rows, and are reached by a single board extending from the center walk of the street to the door. The Venetian style of village not only serves the people with protection from the mosquitoes of the swamp shore land, but also serves as an easy method of obtaining a water supply, of sanitation and of bathing facilities, if this latter is ever indulged in, all from a convenient loose board in the floor. It also permits the wife a better control of her husband. Should he return home late of an evening and is not welcome, from various and sundry reasons, all she needs to do is to lift the gangplank.

Oil Brings Prosperity

The advent of the oil business in Venezuela is changing many of the customs and habits and modes of living among the peon classes. Where a bare living has only been possible for generations, there is now work a plenty at wages of from 6 to 10 times any amount they ever hoped for. Necessities and luxuries never before known are falling into their laps.

The average peon family has probably existed on from 15 to 25 cents per day, but now a peon's services are in demand at from $1.40 to $2 per day; where he lived on pinela (a lump of brown sugar) and plantons (a coarse rind of banana) and had for himself and family a minimum of clothes, he now has plenty to eat and a variety of good food, plenty to wear, and is commencing to consider the necessity of a Ford car. He is getting a free and much needed medical service from the oil companies, and is generally advancing rapidly in health, and with an environment of condition that should and will make him appreciate life and living. No sentimentalist need say now or later that the Venezuela peon is not and will not be a better man and a better citizen as a result of the opportunities of living given him from the oil development of

his country by the English and American oil companies.

President Gomez

The President of Venezuela is General Juan Vicente Gomez, a great administrator, and a name which will endure as one of the great presidents of the Latin American republics of all time.

He has rescued his country from debt and placed it on a firm financial basis, respected by the entire financial world.

He has encouraged industry in his country, and has greatly advanced her in agriculture, in stock raising, in manufacturing, mining and in oil development. Venezuela raises and exports coffee, sugar, cocoa, hides and produce, and exports oil in large and growing quantities.

Without the broad and farseeing policies of General Gomez, and the fair and impartial treatment of foreign capital and of local investments, the present position of his country would not have been attained.

General Gomez has also done much to solidify his country by the building of good roads, by the selection of able administrators in the various states, and by his general policy of amnesty to his own citizens who may have at one time differed with the then government. It is reported, and I believe true, that all political prisoners have been some time since released, reports of various traducers of the Government to the contrary notwithstanding.

Among other able administrators appointed by General Gomez is General Vincencio Perez Soto, the president of the State of Zulia, and located at Maracaibo. President Perez Soto is co-operating with General Gomez in carrying out a program of public improvements. Conditions at Maracaibo are improving daily. The law is being impartially enforced, streets are being kept clean, and a paving program is being carried on. A new waterworks, consisting of an ample supply of good water carried by an aqueduct from the mountains, is planned, and its construction will soon be under way.

Public Improvements

About $2,000,000 are being spent on harbor improvements, and a new aduana (custom house) has just been constructed at Maracaibo.

If President Gomez plans to make of Maracaibo a great harbor—by deepening the harbor at is entrance—it could be one of the greatest harbors of South America, and would be the crowning achievement of his administration. Already 30-foot depth of water is provided for at the new docks being constructed. This would indicate such plans in prospect.

Venezuela needs a better mail service, a better telegraph service and a more modern aduana (custom house) service. It will get these, and I believe all will soon be forthcoming, viewed from the progress of the past few years.

President Perez Soto of Zulia has shown a great breadth of mind and desire for results in his appointment of an advisory board for his public improvement, on which he has named among others two foreigners, McKellar of the Caribbean company and Robert L. Marsdon of the Venezuelan Sun, Ltd.

Attitude Toward Americans

The attitude of the Venezuelan native population to foreigners is usually courteous and fair, and all that could be desired. In social life at Caracas and at Maracaibo, the Venezuelans and Americans mingle freely and no distinctions are made.

Naturally greater intimacies are had between peoples of the same nationality, and especially of the same language. Club memberships are open to both, and are limited, as is usual by the character of the individual and not on nationalistic lines.

There have been a few Americans and other foreigners of the same class who have gone into Venezuela with the apparent idea of ignoring her laws and customs or who with a total lack of consideration impose their views of how things ought to be on the natives. They do not appear to realize that the country is Venezuela, that it belongs to the Venezuelans, who have the right to say what their laws and mode of living shall be, and that no foreigner has a right to question these fundamental rights. A failure to recognize this has caused embarrassments. These misunderstandings are generally viewed liberally by the officials, who use their best efforts to establish a better understanding between their own people and the Americans.

There is still another class of Americans and other foreigners who go to Venezula who happily are in the minority. They are the class who would violate the law any place, drunks, crooks and adventurers of an undesirable type. These sometimes get on the employment list of those sent down from the States, but more frequently go on their own account. Representing themselves as experienced oil workers they get a job. After once getting employment in the oil fields they are then "oil men" and what they do wrong thereafter discredits the oil industry. The officials of the companies and the Government officials are co-operating in eliminating this class from the country. As soon as they are discovered they are deported.

Living Conditions

The great majority employed in the oil business in Venezuela are able and efficient and are serving their companies well. They are law abiding and considerate of the rights of the people in whose country they are living. The companies have done much to make living conditions both for their native and foreign employes the best possible. The Carribean company, with its great opportunity, both in point of time and established fields, has far outstripped all of the other companies in this respect. In its Mene Grande camp, it has good housing, with all the modern conveniences with vegetable gardens and flowers, an athletic field, tennis, golf and clubrooms. This is a model camp or town for any industry anywhere and is so far superior to any condition that could ever have existed at Mene Grande (using this as a type for rural Venezeula) that the benefit to Venezuela from the oil development—covering so much of the country, as it seems it will, can easily be foreseen—also for the benefit of men going to Venezuela for employment in the oil industry, if they are honest and are able to "deliver" on their job, they can get some idea from Mene Grande of what the living conditions supplied by the oil companies will be, as the companies all will take the best possible care of their employes, not always equal to the conditions at Mene Grande, but these will be limited only by the justification and the opportunity for reaching this high standard.

NORTH AND WEST TEXAS

(Continued from Page 38)

goner-A was recompleted for 12 bbls. on the pump at 1,846-64 feet; No. 1 Waggoner-PP pumped 10 bbls. at 2,408-45 feet. Waggoner Refining Co.'s No. 1 Waggoner-B was estimated good for 50 bbls. on the pump from lime at 2,356-71 feet, total depth 2,443 feet.

Young County

Allday Oil Corp.'s No. 1-A Davis was dry and abandoned at 955 feet. Four other dusters were: C. P. Burton's No. 1 Porter, at 660 feet; Reed & Wooten's No. 1 Loftin, as 650 feet; Rose and others' No. 1 Butler at 1,050 feet, and Stafford & Hayes' No. 1 Dyer at 732 feet. Panhandle Refining Co.'s No. 20 McCluskey was deepened to a new pay at 4,224-50 feet and produced 365 bbls. after a 70-quart shot.

TRINIDAD PRODUCTION

It is estimated that March production of crude oil in Trinidad had an increase of 2 per cent over the preceding month. Exports of crude during March came to 1,007,505 gallons, of which 1,004,339 gallons went to the United States and the remainder to Venezuela.

OIL MACHINERY EXPORTED

Exports of oil well machinery during the five months ending in May amounted to $8,798,000, compared with $6,211,000 for the corresponding period of 1926.

BUREAU OF MINES STATISTICS FOR THE MONTH OF MAY

(Continued from Page 32)

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (BARRELS)
(From Bureau of Foreign & Domestic Commerce)

	April, 1927		May, 1927		Jan.-May, 1927	Jan.-May, 1926
	Total	Daily Av.	Total	Daily Av.		
Imports	4,063,000	135,400	4,557,000	147,000	21,749,000	26,055,000
From Mexico	1,947,000	64,900	2,749,000	88,700	10,158,000	19,491,000
From Venezuela	1,055,000	35,100	1,031,000	33,200	6,635,000	4,577,000
From Colombia	591,000	19,700	625,000	20,200	3,496,000	.....
From other countries	470,000	15,700	152,000	4,900	1,460,000	1,987,000
Exports	1,171,000	39,000	1,390,000	44,800	6,129,000	6,348,000
Domestic crude oil:						
To Canada	1,020,000	34,000	1,117,000	36,000	5,032,000	5,015,000
To other countries	151,000	5,000	273,000	8,800	1,097,000	1,332,000
Foreign crude oil	.....	.....	.....	.....	.....	1,000

Note: No shipments to territories during May.

NUMBER OF PRODUCING OIL WELLS COMPLETED*

April, 1927	1,528
May, 1927	1,274
January-May, 1927	6,946
January-May, 1926	6,532

*For states east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

COMPARATIVE ANALYSIS
(Thousands of Barrels of 42 U. S. Gallons)

	Production*		Imports†		Exports†		Stocks End of Period	Dom. Demand	
Crude petroleum:	Total	Dy. Av.	Total	Dy. Av.	Total	Dy. Av.		Total	Dy. Av.
April, 1927	66,964	2,232	4,063	135	1,171	39	‡297,895	.....	....
May, 1927	70,148	2,263	4,557	147	1,390	45	‡307,016	.....	....
Jan.-May, 1927	339,493	2,248	21,749	144	6,129	41	‡307,016	.....	....
May, 1926	65,633	2,117	4,502	145	1,842	59	‡284,357	.....	....
Jan.-May, 1926	308,346	2,042	26,055	173	6,348	42	‡284,357	.....	....
Gasoline:									
April, 1927	26,577	886	377	13	3,614	120	52,379	23,371	779
May, 1927	26,787	864	490	16	4,468	144	48,609	26,579	857
Jan.-May, 1927	134,234	889	2,296	15	18,402	122	48,609	108,542	719
May, 1926	25,271	815	621	20	4,530	146	42,916	24,213	781
Jan.-May, 1926	117,902	781	2,384	16	18,486	122	42,916	97,759	647
Kerosene:									
April, 1927	4,608	154	1	...	1,861	62	8,725	2,776	93
May, 1927	4,663	150	1	...	1,633	53	8,568	3,188	103
Jan.-May, 1927	23,639	157	6	...	7,860	52	8,568	15,792	105
May, 1926	5,210	168	4	...	1,623	52	7,378	3,227	104
Jan.-May, 1926	25,831	170	7	...	8,707	58	7,378	16,674	110
Lubricants:									
April, 1927	2,615	87	1	...	763	25	8,176	1,712	57
May, 1927	2,625	85	1	...	863	28	8,011	1,928	62
Jan.-May, 1927	12,909	85	232	2	4,005	27	8,011	9,701	58
May, 1926	2,863	92	11	...	717	23	7,656	1,869	60
Jan.-May, 1926	13,297	88	21	...	3,901	26	7,656	9,014	60
Wax (thousands of pounds):									
April, 1927	48,917	1,631	1,505	50	25,421	847	211,019	15,322	511
May, 1927	46,267	1,492	729	24	25,228	-814	207,329	25,458	821
Jan.-May, 1927	250,305	1,658	5,652	37	131,705	872	207,329	102,254	677
May, 1926	56,135	1,811	213	7	23,968	773	149,396	19,068	615
Jan.-May, 1926	270,542	1,792	2,616	17	138,303	916	149,396	101,850	675
Gas Oil and Fuel Oil:									
April, 1927	31,856	1,062	805	27	3,325	111	‡23,732	.....	....
May, 1927	33,499	1,081	826	27	4,544	147	‡26,059	.....	....
Jan.-May, 1927	160,853	1,065	3,869	26	19,070	126	‡26,059	.....	....
May, 1926	30,380	980	1,368	44	2,735	88	‡20,858	.....	....
Jan.-May, 1926	145,308	962	5,911	39	15,357	102	‡20,858	.....	....

*Figures in this column for crude petroleum are runs to stills. †From Bureau of Foreign and Domestic Commerce—subject to revision. Exports, except for wax, include shipments to Alaska, Hawaii, and P. R. ‡These stocks to al for east of California only.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES, MAY, 1927

	Crude Oil		Unfinished Oils	Natural Gas Gasoline	Total Oil Run to Stills
	Domestic	Foreign			
East Coast	9,295,000	2,776,000	607,000	141,000	12,819,000
Appalachian	2,401,000	.....	95,000	46,000	2,542,000
Indiana, Illinois, etc.	6,521,000	.....	354,000	152,000	7,027,000
Oklahoma, Kansas, etc.	8,398,000	.....	353,000	350,000	9,101,000
Texas	14,178,000	109,000	463,000	589,000	15,339,000
Louisiana and Arkansas	5,406,000	549,000	179,000	442,000	6,576,000
Rocky Mountain	1,903,000	.....	355,000	93,000	2,351,000
California	18,612,000	.....	*61,000	499,000	19,172,000
United States total	66,714,000	3,434,000	2,467,000	2,312,000	74,927,000
Daily average 5/27	2,152,000	110,800	79,600	74,600	2,417,000
Daily average, 4/27	2,119,200	113,000	110,100	75,400	2,417,700
Texas Gulf Coast	11,152,000	109,000	430,000	519,000	12,210,000
Louisiana Gulf Coast	3,627,000	549,000	83,000	360,000	4,619,000
OUTPUT AND LOSSES—	Gasoline (bbls.)	Kerosene (bbls.)	Gas & Fuel Oils (bbls.)	Lubricants (bbls.)	Wax (bbls.)
East Coast	3,900,000	832,000	5,563,000	802,000	15,620,000
Appalachian	1,009,000	342,000	543,000	359,000	7,474,000
Indiana, Illinois, etc.	3,620,000	456,000	1,896,000	263,000	5,981,000
Oklahoma, Kansas, etc.	4,388,000	776,000	2,863,000	253,000	4,183,000
Texas	5,454,000	1,139,000	6,438,000	613,000	5,838,000
Louisiana and Arkansas	1,901,000	552,000	2,737,000	49,000	4,521,000
Rocky Mountain	1,013,000	132,000	610,000	56,000	2,650,000
California	5,002,000	434,000	12,849,000	230,000	.....
United States total	26,787,000	4,663,000	33,499,000	2,625,000	†46,267,000
Daily average, 5/27	864,100	150,400	1,080,600	84,700	1,492,500
Daily average, 4/27	885,900	153,600	1,061,900	87,200	1,630,600
Texas Gulf Coast	4,769,000	925,000	5,008,000	586,000	5,627,000
Louisiana Gulf Coast	1,502,000	482,000	1,542,000	49,000	4,521,000
OUTPUT AND LOSSES (cont.)—	Coke (tons)	Asphalt (tons)	Other Finished Products (bbls.)	Unfinished Products (bbls.)	Losses (bbls.)
East Coast	13,900	169,000	130,000	44,000	526,000
Appalachian	1,500	.....	35,000	83,000	134,000
Indiana, Illinois, etc.	22,300	22,300	103,000	179,000	246,000
Oklahoma, Kansas, etc.	19,300	700	48,000	202,000	448,000
Texas	13,200	18,300	7,000	215,000	791,000
Louisiana and Arkansas	13,800	56,900	136,000	670,000	135,000
Rocky Mountain	3,900	4,300	19,000	416,000	49,000
California	.....	47,500	121,000	*	270,000
United States total	†87,900	†319,000	599,000	1,809,000	2,599,000
Daily average, 5/27	2,840	10,290	19,300	58,400	83,800
Daily average, 4/27	2,950	9,130	18,700	65,900	74,600
Texas Gulf Coast	11,500	18,300	2,000	63,000	683,000
Louisiana Gulf Coast	13,200	55,300	125,000	491,000	46,000

*Net unfinished oils—usual gross figures not yet available. †Wax, coke and asphalt equivalent to 282.1 pounds per barrel and 5.15 and 5.42 barrels per ton, respectively.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, MAY, 1927
(Barrels.)

	Straight Run	%	Cracked	%	Natural-gas Gasoline	%	Total
East Coast	2,467,000	63	1,292,000	33	141,000	4	3,900,000
Appalachian	719,000	71	244,000	24	46,000	5	1,009,000
Indiana, Illinois, etc.	1,960,000	54	1,508,000	42	152,000	4	3,620,000
Oklahoma, Kansas, etc.	2,785,000	63	1,253,000	29	350,000	8	4,388,000
Texas	3,053,000	51	2,312,000	39	589,000	10	5,954,000
Louisiana and Arkansas	979,000	52	480,000	25	442,000	23	1,901,000
Rocky Mountain	532,000	53	388,000	38	93,000	9	1,013,000
California	3,877,000	77	237,000	5	*888,000	18	5,002,000
U. S. total	16,372,000	61	7,714,000	29	2,701,000	10	26,787,000
U. S. total 4/27	16,311,000	61	7,663,000	29	2,603,000	10	26,577,000
Gulf Coasts	2,928,000	47	2,464,000	39	879,000	14	6,271,000

*Includes natural-gas gasoline run through pipe lines.

STOCKS HELD BY THE REFINING COMPANIES IN UNITED STATES, MAY 31, 1927

	Gasoline (Bbls.)	Kerosene (Bbls.)	Gas Oil.Fuel Oils (Bbls.)	Lubricants (Bbls.)
East Coast	10,233,000	1,337,000	6,866,000	2,822,000
Appalachian	1,040,000	286,000	856,000	996,000
Indiana, Illinois, etc.	5,294,000	694,000	1,108,000	681,000
Oklahoma, Kansas, etc.	4,292,000	509,000	4,672,000	468,000
Texas	6,822,000	1,781,000	8,419,000	1,902,000
Louisiana and Arkansas	3,438,000	1,706,000	3,683,000	117,000
Rocky Mountain	4,855,000	325,000	555,000	126,000
California	12,635,000	1,930,000	.....	899,000
Total United States	48,609,000	8,568,000	*26,059,000	8,011,000
Total United States 4/30/27	52,379,000	8,725,000	*23,732,000	8,176,000
Texas Gulf Coast	5,687,000	1,375,000	7,106,000	1,869,000
Louisiana Gulf Coast	3,318,000	1,672,000	2,980,000	117,000

	Wax (Lbs.)	Coke (Tons)	Asphalt (Tons)	Other Fin. Prod.(Bbls.)	Unfinished Oils(Bbls.)
East Coast	102,127,000	25,100	92,100	155,000	5,273,000
Appalachian	23,633,000	400	500	89,000	1,350,000
Indiana, Illinois, etc.	17,954,000	12,900	33,600	407,000	3,523,000
Oklahoma, Kansas, etc.	8,813,000	47,100	1,500	273,000	2,533,000
Texas	16,262,000	103,100	7,700	10,000	9,429,000
Louisiana and Arkansas	28,534,000	64,000	22,800	51,000	2,702,000
Rocky Mountain	9,905,000	76,800	9,000	21,000	2,165,000
California	101,000	.....	55,300	362,000	†10,785,000
Total United States	207,329,000	329,400	222,500	1,368,000	37,760,000
Total United States 4/30/27	211,019,000	318,500	219,500	1,410,000	38,095,000
Texas Gulf Coast	15,864,000	97,200	7,700	5,000	8,795,000
Louisiana Gulf Coast	28,534,000	62,500	22,400	44,000	2,344,000

*East of California. †Includes 3,374,000 bbls. tops in storage.

Natural-Gas Gasoline, May, 1927

The production of natural-gas gasoline in May, 1927, amounted to 135,200,000 gallons, a daily average of 4,360,000 gallons. This represents a decrease from the record figure for daily average production the previous month of 80,000 gallons. Declines in production in the Appalachian and Indiana-Illinois districts because of the seasonal falling off of gas demands, were nearly compensated by increased production in the Mid-Continent Field. Stocks of raw natural-gas gasoline at the plants on May 31, 1927, amounted to 38,896,000 gallons, the highest ever recorded, and an increase over April of 5,799,000 gallons or 18 per cent. Blending at the plants in May showed little change over the previous month.

(Thousands of gallons)

	Natural-Gas Gasoline: Production* April, 1927	Production* May, 1927	Production* May, 1926	Stocks End of Month April, 1927	Stocks End of Month April, 1927	Stocks End of Month May, 1927	Blended Motor Fuel May, 1927: Nat.-Gasoline Used	Naphtha or Other Oils Used	Stocks End of Month
Appalachian	8,300	7,200	6,600	4,440	4,991	227	231	308	
Ind., Ill., etc.	1,400	1,200	1,300	555	633	55	6	16	
Okla., Kans., etc.	45,300	47,700	42,600	14,185	17,437	2,115	3,404	1,092	
Texas	26,400	26,700	18,400	†10,234	11,716	414	759	139	
La. and Ark.	7,000	7,300	6,400	1,928	2,186	245	334	145	
Rocky Mountain	4,000	4,100	3,800	444	524	134	87	153	
Total east of Calif.	92,400	94,200	79,100	†31,786	37,487	3,190	4,821	1,853	
California	40,800	41,000	31,200	1,311	1,409	Not available			1
Total U. S.	133,200	135,200	110,300	†33,097	38,896	.....	.....	.....	1,854
Daily average	4,440	4,360	3,560	.....	.....	.....	.....	.....	.....

*Approximately 97 per cent net production; 3 per cent gross.
†Revised.

The indicated output of motor fuel from the above and other sources may be expressed by the following table:

(Thousands of gallons)

	April, 1927	May, 1927	May, 1926
Total gasoline produced at refineries* †	1,116,200	1,125,000	1,061,400
Raw gasoline blended at plants east of California	3,100	3,200	2,000
Raw gasoline sold direct to jobbers (estimated)	800	800	800
Benzol production‡	9,100	9,300	7,400
Total motor fuel produced	1,129,200	1,138,400	1,071,600
Daily average	37,640	36,720	34,570
*Includes natural-gas gasoline blended at refineries	95,000	97,100	82,500
†Includes natural-gas gasoline run through refinery pipe lines in California	14,300	16,300	11,700

‡Estimated with production of by-product coke as a basis.

JUNE REPORT SHOWS DECLINE IN COMPLETIONS

(Continued from Page 33)

Stephens	4	42	0	3
Throckmorton	6	387	4	0
Wichita	36	630	17	0
Wilbarger	24	1,233	7	0
Young	16	2,236	9	0
Total N. C. Texas	279	28,565	116	9
Total June	327	46,579	127	9
Total, May	397	63,108	164	9
Difference	70	16,529	37	0

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
West Texas—				
Crane	13	52	1	66
Crockett	0	5	5	10
Howard	0	15	6	21
Jones	4	10	9	23
Mitchell	0	11	1	12
Reagan	1	10	7	18
Upton	2	16	9	27
Miscellaneous	15	78	50	143
Total	35	197	88	320
North Central Texas—				
Archer	1	15	4	20
Brown	3	40	20	63
Callahan	3	13	5	21
Coleman	4	18	9	31
Cooke	4	21	3	28
Eastland	4	32	6	42
Jack	0	10	3	13
Montague	0	7	7	14
Shackelford	0	21	11	32
Stephens	0	8	4	12
Throckmorton	0	10	6	16
Wichita	1	13	9	23
Wilbarger	3	17	8	28
Young	2	28	12	42
Miscellaneous	4	14	33	51
Total	29	267	140	436
Grand total June	64	464	228	756
Grand total May	92	497	212	801
Difference	28	33	16	45

TEXAS PANHANDLE

Summary of Completed Wells

County—	Comp.	Prod.	Dry	Gas
Carson	19	3,955	1	1
Gray	5	541	1	0
Hartley	2	0	2	0
Hutchinson	47	8,209	0	1
Moore	2	120	1	0
Roberts	1	0	1	0
Wheeler	1	50	0	0
Total June	77	12,875	6	2
Total May	90	32,774	4	4
Difference	13	19,899	2	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	S.D.	Ttl.
Carson	0	17	5	22
Gray	13	35	6	54
Hutchinson	8	88	31	127
Wheeler	2	13	7	22
Miscellaneous	6	30	25	61
Total June	29	183	74	286
Total May	46	194	86	326
Difference	17	11	12	40

SOUTHWEST TEXAS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Mirando	15	...	10	5	7	33	40
Rockdale-Minerva	5	77	0	0	3	7	10
Luling	1	35	0	0	1	3	4
Kingsville	3	...	3	0	0	6	6
Refugio	4	...	0	4	0	7	7
Adams Field	2	...	0	2	1	2	3
Somerset	2	27	0	0	1	0	1
Miscellaneous Fields	21	...	20	1	12	62	75
Total June	53	139	33	12	25	121	146
Total May	90	739	44	17	23	133	156
Difference	37	600	11	5	2	12	10

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Dry	Rigs	Drg.	Ttl.
Anderson	0	0	0	2	2
Cherokee	1	1	0	5	5
Freestone	1	1	0	2	2
Henderson	1	1	0	1	1
Hunt	0	0	0	1	1
Kaufman	1	1	0	0	0
Limestone	0	0	0	4	4
Navarro	2	2	0	3	3
Fannin	1	1	0	0	0
Franklin	1	1	0	0	0
Total June	8	8	0	18	18
Total May	6	6	0	20	20
Difference	2	2	0	2	2

GULF COAST

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Boling	3	100	2	0	5	8	13
Batson	1	5	0	0	1	3	4
Blue Ridge	2	1,200	1	0	0	6	6
Big Creek	5	350	2	0	1	1	2
Barber Hill	1	200	0	0	1	2	3
Damon Mound	0	0	0	0	0	1	1
Edgerly (La.)	2	25	2	0	0	6	6
Goose Creek	5	280	1	0	1	5	6
Hull	6	4,275	1	0	2	8	10
Humble	1	250	0	0	1	3	4
High Island	0	0	0	0	0	1	1
Jennings (La.)	4	600	2	0	0	2	2
Lockp't (La.)	7	3,450	3	0	1	6	7
Markham	2	60	0	1	0	3	3
Nash	1	450	0	0	0	3	3
Orange	3	545	1	0	1	3	4
Orchard	0	0	0	0	0	1	1
Pierce Jnct.	8	4,750	1	2	7	3	10
Spindletop	15	22,700	3	0	5	28	33
S. Liberty	3	10	2	0	0	0	0
Vinton (La.)	3	95	0	0	1	6	7
W. Columbia	0	0	0	0	1	1	2
Dayton	0	0	0	0	1	2	3
Misc.	15	0	14	1	15	49	64
Stark (La.)	0	0	0	0	0	2	2
Total, June	88	39,345	34	4	44	153	197
Total, May	98	51,375	45	1	29	156	185
Difference	10	12,030	11	3	15	3	12

WYOMING

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy	1	30	0	0	1	4	5
Salt Creek	18	6,390	1	0	10	42	52
Lance Creek	1	35	0	0	0	1	1
Big Horn Basin	1	192	0	0	4	56	60
Lost Soldier & Carbon Co.	0	0	0	0	2	22	24
Rock River	0	0	0	0	0	6	6
Fremont Co.	0	0	0	0	1	21	22
Osage	0	0	0	0	2	3	5
Natrona Co.	0	0	0	0	0	6	6
Lincoln & Uintah Cos.	1	0	1	0	9	44	53
Baxter Basin	0	0	0	0	0	7	7
Miscellaneous	0	0	0	0	2	24	26
Total June	22	6,647	2	0	31	236	267
Total May	32	45,142	3	1	28	244	272
Difference	10	38,495	1	1	3	8	5

MONTANA

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Kevin-Sunb'rst	41	2,528	15	2	3	60	63
Cat Creek and Miscellaneous	5	0	4	1	3	77	80
Total June	46	2,528	19	3	6	137	143
Total May	26	1,650	8	0	7	131	138
Difference	20	878	11	3	1	6	5

COLORADO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total June	12	410	8	1	6	96	102
Total May	12	100	11	0	7	98	105
Difference	0	310	3	1	1	2	3

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total June	1	0	1	0	2	35	37
Total May	2	0	2	0	1	36	37
Difference	1	0	1	0	1	1	0

NEW MEXICO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total June	4	120	3	0	12	125	137
Total May	11	20	9	0	11	124	135
Difference	7	100	6	0	1	1	2

EASTERN FIELDS

Summary of Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Allegany	52	203	0	1
Bradford	192	556	0	0
Middle Field	8	20	0	0
Venango-Clarion	25	27	2	2
Butler-Armstrong	8	9	0	3
Southwest Pennsylvania	23	125	7	10
West Virginia	60	208	8	34
Southeast Ohio	75	1,026	21	8
Total June	443	2,174	38	59
Total May	440	2,174	46	59
Difference	3	0	8	0

Summary of Wells Drilling

Field—	Rigs	Drg.	Ttl.
Allegany	12	34	46
Bradford	19	104	123
Middle Field	1	3	4
Venango-Clarion	2	17	19
Butler-Armstrong	10	15	25
Southwest Pennsylvania	7	21	28
West Virginia	31	104	135
Southeast Ohio	34	87	121
Total June 30	116	385	501
Total May 31	113	395	508
Difference	3	10	7

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prd.	Dry	Gas	Rigs	Drg.	Ttl.
Knox	2	0	2	0	1	6	7
Ashland	2	0	1	1	7	12	19
Medina	10	5	3	2	2	6	8
Lorain	0	0	0	0	1	5	6
Wayne	2	0	0	2	2	3	5
Holmes	7	245	1	1	4	15	19
Athens	1	0	0	1	0	7	7
Coshocton	0	0	0	0	2	4	6
Cuyahoga	1	0	0	1	1	8	9
Jackson	0	0	0	0	0	1	1
Summitt	0	0	0	0	1	1	2
Total June	25	250	7	8	21	68	89
Total May	20	293	6	9	32	54	86
Difference	5	43	1	1	11	14	3

ILLINOIS

Summary of Field Operations

	Comp.	Prd.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	1	25	0	0	3	2	5
Cumberland	0	0	0	0	0	3	3
Crawford	3	10	1	1	0	6	6
Lawrence	2	105	0	0	0	5	5
Wabash	5	51	1	0	0	11	11
Marion	0	0	0	0	0	1	1
Edgar	0	0	0	0	0	2	2
Morgan	0	0	0	0	0	1	1
Marshall	0	0	0	0	0	1	1
Madison	0	0	0	0	0	2	2
Macon	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
St. Clair	0	0	0	0	0	1	1
Tazwell	0	0	0	0	0	1	1
Total June	11	191	2	1	3	38	41
Total May	9	155	6	5	5	26	31
Difference	2	36	4	4	2	12	10

LIMA FIELD

Summary of Field Operations

	Comp.	Prd.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	4	33	1	0	1	3	4
Hancock	1	15	0	0	0	1	1
Allen	1	15	0	0	0	2	2
Auglaize	3	26	0	0	0	2	2
Sandusky	3	10	1	0	0	1	1
Mercer	1	12	0	0	0	2	2
Van Wert	0	0	0	0	0	1	1
Seneca	1	0	1	0	0	2	2
Lucas	0	0	0	0	0	2	2
Ottawa	0	0	0	0	0	1	1
Shelby	1	7	0	0	0	1	1
Hardin	2	0	1	1	0	2	2
Darke	0	0	0	0	0	3	3
Paulding	0	0	0	0	0	1	1
Wyandot	1	0	0	1	0	0	0
Total June	18	118	4	2	1	24	25
Total May	22	284	4	2	3	27	30
Difference	4	166	0	0	2	3	5

INDIANA

Summary of Field Operations

	Comp.	Prd.	Dry	Gas	Rigs	Drg.	Ttl.
Blackford	1	30	0	0	0	2	2
Jay	3	17	1	0	0	1	1
Adams	4	21	1	0	0	4	4
Huntington	0	0	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Gibson	6	265	2	0	0	5	5
Pike	5	40	4	0	0	2	2
Daviess	3	8	2	0	0	5	5
Sullivan	3	60	2	0	0	1	1
Vigo	0	0	0	0	0	4	4
Allen	0	0	0	0	2	2	4
Knox	1	14	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Benton	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	2	2
Marion	0	0	0	0	0	1	1
Madison	1	0	0	1	0	0	0
Martin	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Spencer	1	0	1	0	0	1	1
Warrick	1	0	1	0	0	0	0
Perry	1	0	1	0	0	0	0
Bartholomew	0	0	0	0	0	1	1
Miami	0	0	0	0	0	1	1
White	0	0	0	0	0	1	1
Decatur	0	0	0	0	0	1	1
Kosciusko	2	0	0	2	0	0	0
Fountain	0	0	0	0	0	1	1
Hancock	1	0	0	1	0	1	1
Harrison	2	0	0	2	0	0	0
Lawrence	2	0	0	2	0	0	0
Montgomery	0	0	0	0	0	1	1
Total June	37	455	15	8	2	44	46
Total May	19	314	8	3	2	51	53
Difference	18	141	7	5	0	7	7

MICHIGAN

Summary of Field Operations

	Comp.	Prd.	Dry	Gas	Rigs	Drg.	Ttl.
Saginaw	24	506	1	1	2	51	53
Gratiot	1	0	0	1	0	2	2
Alcona	0	0	0	0	0	1	1
Muskegon	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Iosco	0	0	0	0	0	1	1
Wayne	0	0	0	0	0	1	1
Genessee	0	0	0	0	0	1	1
Shiawasee	0	0	0	0	0	1	1
Total June	25	506	0	2	2	60	62
Total May	25	434	1	0	12	52	65
Difference	0	72	1	2	10	7	3

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Warren	10	34	7	0	0	10	10
Allen	1	1	0	0	0	11	11
Barren	20	200	2	0	0	36	36
Ohio	30	2,251	6	0	0	30	30
Daviess	7	152	3	0	0	6	6
Hancock	0	0	0	0	1	0	1
Cumberland-Monroe	0	0	0	0	0	14	14
Simpson	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	2	2
Butler	0	0	0	0	0	1	1
Adair	0	0	0	0	1	0	1
Grayson	0	0	0	0	0	2	2
Wayne	0	0	0	0	0	5	5
Lee-Owsley	0	0	0	0	2	8	10
Estill	0	0	0	0	0	4	4
Morgan	0	0	0	0	0	1	1
Powell	0	0	0	0	0	1	1
Floyd	3	0	0	3	0	0	0
Knox	1	0	1	0	0	3	3
Carter	2	5	0	0	0	0	0
Laurel	0	0	0	0	0	1	1
McCreary	0	0	0	0	0	2	2
Johnson-Magoffin	2	25	0	0	0	10	10
Kentucky	76	2,669	19	3	4	149	153
Tennesse	3	459	0	0	0	38	38
Mississippi	0	0	0	0	11	19	30
Alabama	0	0	0	0	0	0	0
Florida	1	0	1	0	2	12	14
Total June	80	3,118	20	3	17	224	241
Total May	106	3,223	23	7	21	220	241
Difference	26	105	3	4	4	4	0

ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Union	14	342	5	3	12	23	35
Ouachita	7	410	3	1	0	14	14
Columbia	3	0	3	0	1	1	2

Nevada	5	585	0	6	2	4	6
Miscellaneous.	4	0	4	0	1	4	5
Total June.	33	1,337	15	4	16	46	62
Total May..	36	1,176	14	6	16	45	61
Difference .	3	161	1	2	0	1	1

NORTH LOUISIANA

Summary of Field Operations

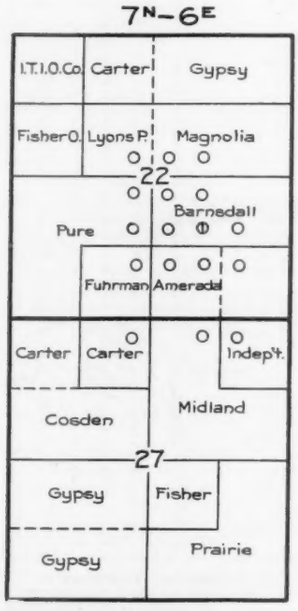
Parish—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Bienville	2	0	2	0	1	1	2
Bossier	5	40	3	1	2	7	9
Caddo	26	563	9	5	9	33	42
Claiborne	1	0	1	0	1	2	3
DeSoto	3	276	1	0	2	7	9
Grant	2	0	2	0	2	3	5
LaSalle	8	286	3	1	3	8	11
Monroe dist...	7	0	0	7	4	6	10
Natchitoches .	3	0	3	0	0	1	1
Red River	1	38	0	0	0	2	2
Richland	1	0	0	1	2	4	6
Sabine	5	520	1	0	4	16	20
Webster	2	140	1	0	4	7	11
Winn	5	0	5	0	1	4	5
Miscellaneous..	1	0	1	0	3	2	5
Total June .	72	1,863	32	15	38	103	141
Total May ..	51	869	24	10	40	95	135
Difference ..	21	994	8	5	2	8	6

OPERATORS IN SEMINOLE ARE PLAYING FAIR

(Continued from Page 31)

NE Section 24-9-5, which started at 300 bbls. in the Hunton lime, would have prompted at least nine other drilling wells which would have been started in April. The well does not look so good at this time as it is down to 50 bbls. a day in the Wilcox sand. It first showed commercial production on March 26.

Other wells that are looked upon as important and which would have started a lot of drilling are shown with this account, together with Umpire Collins' picture of what would have occurred under a free-for-all system of drilling, but



Instead of one well drilling, the above is Umpire Collins' idea of what would have been, under normal methods of field operations. The Barnsdall well looks promising and may be an extension of the pool opened in Section 1-7-6.

which have started nothing because of the agreement.

Important Tests

When Mr. Collins took over the job of regulating the Seminole Field he gathered data on the wells considered most important and which should be most closely watched. The names of the owners, the sections in which the wells are located and their last recorded drilling depths are given below:

B. F. Garland, Section 10-4n-3e, drilling at 1,230 feet.

Ramsey Brothers, Section 9-4n-5e, drilling at 2,709 feet.

L. A. Gillespie and others, Section 12-5n-4e, drilling at 1,560 feet.

T. B. Slick, Section 21-5n-6e, estimated at 3,000 bbls.

Wiser Oil Co., Section 25-6n-1e, water sand at 4,192-94 feet; underreaming 6¾-inch.

T. B. Slick, Section 1-6n-6e, drilling at 2,165 feet.

Wiser Oil Co., Section 20-6n-7e, set 8¼-inch at 3,827 feet.

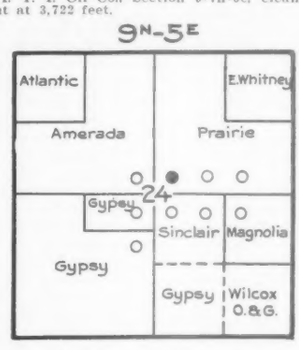
Carter Oil Co., Section 18-6n-8e, sand at 2,793-2,814 feet; flowed 55 bbls.

Roxana Petroleum Co., Section 22-7n-3e, hole full of water at 3,967.

Pearson Pool, in and about Section 30-7n-4e.

I. T. I. Oil Co., Section 1-7n-6e, flowing 14,800 bbls.

I. T. I. Oil Co., Section 9-7n-6e, cleaning out at 3,722 feet.



This Prairie Oil & Gas Co. Hunton Lime producer would have called for the eight locations indicated on the map. Nothing new has been started.

Barnsdall Oil Co., Section 22-7n-6e, shut down at 4,152 feet.

Mid-Continen. Petroleum Co., Section 28-7n-6e, drilling at 2,800 feet.

Independent Oil & Gas Co., Section 30-7n-6e, hole full of water; Wilcox at 4,631-70 feet; abandoned.

Empire Gas & Fuel Co., Section 14-7n-7e, water in Wilcox at 4,713-41 feet; abandoned.

Gypsy Oil Co., Section 20-7n-7e, drilling at 3,070 feet.

I. T. I. Oil Co., Section 32-7n-7e, drilling at 3,000 feet.

Amerada Petroleum Corp., Section 24-8n-4e, hole full of water; Wilcox at 4,200 feet.

Mid-Kansas Oil & Gas Co., 34-8n-4e, flowed sulphur water at 4,225-30 feet; underreaming pipe to shut off water.

I. T. I. Oil Co., Section 16-8n-5e, shut down at 4,087 feet in Hunton.

Gypsy Oil Co., Section 4-8n-6e, hole full of water; drilling at 4,435 feet.

Gypsy Oil Co., Section 5-8n-6e, drilling at 4,154 feet.

Gypsy Oil Co., Section 33-8n-6e, set 8¼-inch at 3,885 feet.

Empire Gas & Fuel Co., Section 7-8n-7e, drilling at 4,135 feet.

Wentz and others, Section 21-8n-7e, fishing for two strings of tools; total depth, 3,310 feet.

Prairie Oil & Gas Co., Section 31-8n-7e, drilling at 2,420 feet.

Magnolia Petroleum Co., Section 31-8n-7e, cemented 8¼-inch pipe at 3,200 feet.

Magnolia Petroleum Co., Section 9-8n-8e, cemented 8¼-inch pipe at 3,662 feet.

Independent Oil & Gas Co., Section 14-8n-9e, plugged and abandoned at 3,900 feet.

McCulloch Oil Co., Section 2-9n-2e, location.

Independent Oil & Gas Co., Section 32-9n-5e, drilling at 3,776 feet.

Barnsdall Oil Co., Section 31-9n-6e, drilling at 3,918 feet.

Holm & Jarvis, Section 11-9n-7e, drilling at 3,705 feet.

Barnsdall Oil Co., Section 7-9n-7e, completed as gas well.

Magnolia Petroleum Co., Section 20-9n-7e, hole full of water; Wilcox at 4,345-54 feet.

Gypsy Oil Co. and others, Section 21-9n-7e, shu. down at 3,435 feet.

Barnsdall Oil Co., Section 29-9n-7e, drilling at 3,609 feet.

I. T. I. Oil Co., Section 31-9n-7e, drilling on iron at 4,416 feet.

Sikes and others, Section 12-10n-3e, shut down at 3,620 feet.

Central Commercial Oil Co., Section 28-10n-4e, shut down at 3,187 feet.

F. Davis, Section 16-10n-5e, drilling at 2,100 feet.

Buford and others, Section 14-10n-5e, shut down at 4,685 feet.

Tidal Oil Co., 26-10n-5e, drilling at 4,235 feet in Fayetteville shale.

Prairie Oil & Gas Co., Section 17-10n-6e, fishing at 3,425 feet.

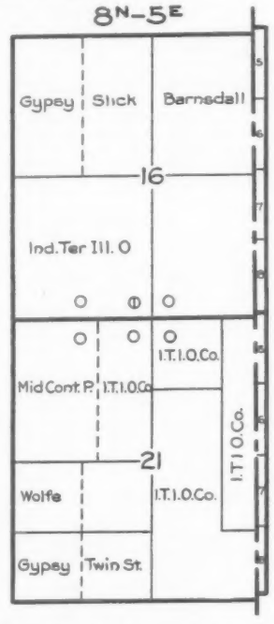
Prairie Oil & Gas Co., Section 30-10n-6e, Woodford shale at 4,225 feet.

Prairie Oil & Gas Co., Section 22-10n-6e, 200-bbl. well in Hunton lime.

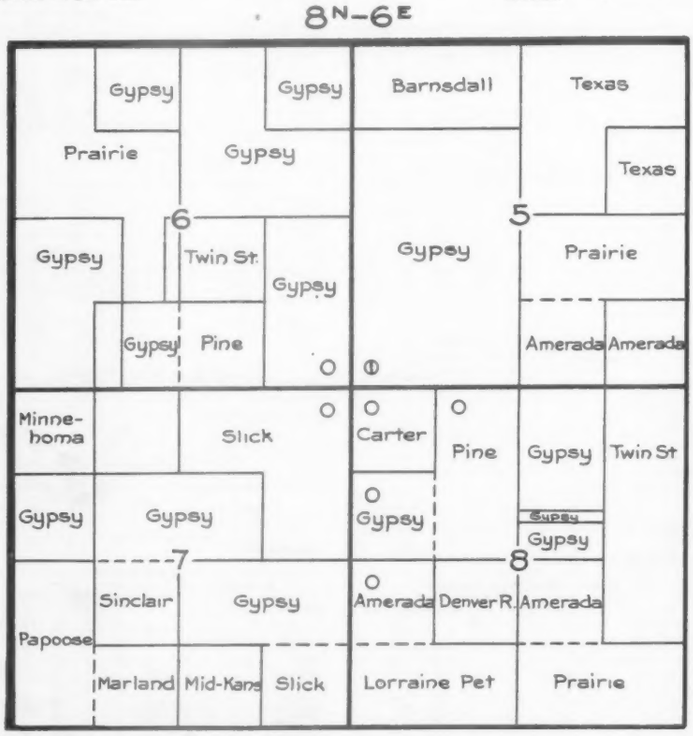
Continental Oil Co., Section 28-10n-7e, drilling at 3,660 feet.

Gypsy Oil Co. and others, Section 34-10n-7e, hole full of water; Wilcox at 4,515 feet; drilling at 4,553 feet.

Wilcox Oil & Gas Co., Section 32-11n-2e, drilling at 3,691 feet.



The I. T. I. well in Section 16 is shut down in the Hunton Lime at 4,085-97 feet. It would have prompted the drilling of the five locations indicated under normal conditions.



The Gypsy Oil Co. well with showings in the 3,500 and 4,100-foot horizons, is drilling in Viola Lime at 4,192 feet. It looked good enough to have occasioned the starting of wells on the locations indicated had there been no curtailment movement. Nothing has been started.

TO ISSUE TECHNICAL PAPER 323-B SOON

(Continued from Page 125)

mately 15 different machines used for taking the flash by different methods as required by jobbers, etc. This has been cut down now to approximately two methods.

"It can be seen that there has been a gradual decrease in the number of methods of test in vogue over past years which is due to the A. S. T. M. constantly working on this problem until we now have practically uniform methods of test for petroleum products all over the United States, not only simplifying the tests but making them more accurate and at the same time eliminating expensive and unnecessary equipment.

"One of the most important pieces of work accomplished by the committee in this convention was getting the Government to adopt the A. S. T. M. methods of test so far as practicable for their bulletin which will shortly be published as Technical Paper 323-B so that the states which have had their own laws will automatically take the standard tests of the A. S. T. M.

Of Interest to Western Refiners

"It may be of interest to the members of the Western Petroleum Refiners Association to know that the meeting of the advisory board with the Technical Committee of Lubricants and Liquid Fuels of the Government at French Lick tried to point out the importance to the government representative of the adoption of the A. S. T. M. methods of test as near as practical as the refining industry is selling its products to the various jobbers and consumers, that they desire a standard method of tests on petroleum products and that Bulletin 323-B when published is practically the only standard test set up which contains the A. S. T. M. methods of test. The real value that the refiners in the Mid-Continent through the W. P. R. A. are going to receive from the standard methods of test should not be overlooked from this viewpoint as it means a complete understanding between jobbers and consumers and the manufacturers of petroleum products. Also, the representation at this meeting consisted of all representatives from the manufacturing departments of the different oil companies which necessarily means a complete understanding of uniform methods of the oil companies, and is not the work of any one individual, but shows close co-operation of the companies which naturally is going to materially assist from a sales viewpoint.

"Again, I would like to point out that this committee as a whole has not stopped with the United States. We have now found that foreign countries have started to adopt our methods of test which are being conveyed to them through this committee and that contracts are now being drawn specifying A. S. T. M. methods, so that the refiner in the Mid-Continent will be using the same apparatus for testing as foreign manufacturers and should be checking on petroleum products shipped from the United States to foreign consumers.

The D-2 Committee has asked permission for a complete book on all methods of test for petroleum products to be published by the A. S. T. M. Association. From all indications this approval will be given and is another step toward standardization of petroleum testing and should be of great interest to the refiners in the Mid-Continent Field. Outside of the government bulletin there is not available anywhere a standard method of test that could be placed before in the hands of the jobbers, states and consumers, and it would be my recommendation that the Western Petroleum Refiners Association follow this particular publication and arrange to purchase a certain amount together with various refiners to circularize as it is of paramount importance to the refining industry as a whole.

DESIGN NOW COMPLETED FOR OIL SPRINGS TABLET

CUBA, N. Y., July 4.—The University of the State of New York and the New York State Oil Producers' association, working through their representatives, C. A. Hartnagle of Albany and Lewis H. Thornton of Wellsville, have completed the design for the bronze tablet to be placed upon the monument which will be unveiled at Seneca Oil Spring near this village on July 23.

The tablet will bear in relief the figure of a Franciscan monk of the seventeenth century and of an Indian of the same period, in commemoration of the fact that Father d'Allion, a Franciscan missionary, was the first white man to learn of the Oil Spring, which had from time immemorial been held in religious awe by the Indians of the lake country.

The inscription will read as follows:

"1627—Seneca Oil Spring—1927."

"Its history forms the first chapter in the development of the petroleum industry in America—a gigantic world enterprise transforming modern life.

"1627—Oil American continent first recorded in this region by the Franciscan, Joseph de la Roche d'Allion.

"1656—Spring mentioned by the Jesuit Father, Paul le Jeune.

"1721—Prior to this year, spring visited by Joncaire the Elder.

"1767—Oil from this spring sent to Sir William Johnson as a cure for his wounds.

"1797—Spring permanently reserved by Indians in the treaty of Big Tree.

"1833—Description of the spring by Professor Benjamin Silliman of Yale university.

"Erected as a tercentenary memorial on July 23, 1927, by the New York Oil Producers Association and the University of the State of New York."

ADVANCE OKLAHOMA GASOLINE PRICES

(Continued from Page 28)

Kerosene stocks decreased approximately 150,000 bbls. during the month, although at the end of the month they were approximately 1,200,000 bbls. greater than on the same date last year. For the first time in several months there was a substantial reduction of almost 4,000,000 pounds in wax stocks.

Fuel and gas stocks increased almost 2,500,000 bbls. This reflects a manufacturing situation in which refiners in an attempt to strengthen their gasoline and kerosene market have curtailed their cracking and skimming operations so as to reduce the percentage of gasoline yield from crude oil. This action has meant a corresponding increase in the output of fuel oil and gas oil. This situation always develops when crude oil and gasoline prices are relatively low. There is no incentive to secure the maximum yields of the most valuable product secured from crude and the trend is to dump as much of the crude oil on the market as possible in the form of fuel oil, an outlet which is generally stimulated by low prices.

Mid-Continent Situation

In the accompanying table the vital figures of the Mid-Continent refinery situation have been segregated from the United States data. For the most part the trend in Mid-Continent operations was similar to that of the country as a whole. Crude oil runs to stills were greater than in May but gasoline output was less. Kerosene output increased but stocks due to a better movement decreased during May. Gas and fuel oil stocks increased approximately 300,000 bbls.

The outstanding difference between the Mid-Continent situation and that of the country as a whole lay in the movement of gasoline. Mid-Continent refiners only reduced their stocks 48,000 bbls. during the month. With their output less than in April this situation is due to the fact that refiners did not have as good a movement of their gasoline as the average for the rest of the country. Gasoline stocks in the Mid-Continent totaled 5,547,000 bbls. on May 31, or approximately 30 per cent greater than on the same date of 1926.

This relative stock situation was brought about by the fact that while Mid-Continent refiners have attempted to limit the amount of gasoline offered the consuming trade in an attempt to strengthen their market, their competitors have reduced their stocks by enlarging their marketing territory. Complaints are often heard from Mid-Continent refiners to the effect that outside refinery organizations are constantly underselling them in what they consider thir normal marketing territory.

Gasolines and Naphtha

Refiners were more concerned in advancing their U. S. Motor gasolines than they were their higher gravity grades. In the sale of the latter product, they were feeling the competition of North Texas refiners who up to the first of the week had not advanced their prices in line with the Oklahoma refiners. Sales of 400 endpoint gasoline were made as low as 7 cents the first of the week, although the general market was from 7⅛ to 7¼ cents. The 64-66 375 was being quoted at 7¼ to 7½ cents.

Most refiners advanced their lower gravity gasolines the same as U. S. Motor. The demand for naphtha was stronger with 6½ to 6¾ cents the prevailing quotation on 450 endpoint material.

Fuel Oils and Distillates

With a good movement on contracts and an active spot demand from all classes of buyers, the fuel oil market in Oklahoma is tight. Despite this tightness there is no general disposition to advance prices yet. Any grade of fuel oil suitable for general use is bringing a low of 90 cents regardless of gravity.

The movement of gas oil is not strong as that of fuel oil. Gas oil was offered rather freely at a low of 2⅝ cents with an occasional sale reported at 2½ cents.

Kerosene and Distillates

An active demand has firmed the distillate market. Prices vary considerable with the specifications. Buyers reported that 3¼ cents was low on a 38-40 distillate with a low flash and a good color and odor. This is the grade for which there is the greatest demand. Buyers who are not particular about flash, color and odor with a 36 gravity are able to buy as low as 3 cents. The product sold at this low price is nothing more than a high gravity untreated gas oil.

The retail kerosene demand is not active and this has meant a dearth of orders at refineries. Sellers, however, have been able to maintain the prices in effect last week.

Natural Gasolines

There were practically no changes in Oklahoma natural gasoline prices during the past week. A few sellers reported that they were able to obtain 4⅝ cents for Grade A which represents a one-eighth cent advance over last week. Manufacturers were encouraged by the better tone in the refinery market and were not inclined to give additional price concessions. No large orders were placed during the week but the smaller sales were being received in sufficient volume to keep distress material off the market.

BUREAU OF MINES POSITIONS

The United States Civil Service Commission announces open competitive examinations for mineral economist, $3,800; associate mineral economist, 3,000, and assistant mineral economist, $2,400. Applications must be on file not later than August 2.

EXPORTS FROM CARTAGENA

Exports of crude petroleum from Cartagena during April amounted to 793,120 bbls. compared with 784,702 bbls. in March, the total for the first four months of the coming year coming to 3,329,275 bbls.

PRAIRIE P. L. SHIPMENTS

The Prairie Pipe Line Co.'s crude oil shipments in June were 5,505,551.54 bbls., a daily average of 183,518 bbls. per day.

AMERICAN
HEAVY DUTY TYPE "C"
ROLLER BEARINGS
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Standard Equipment
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Traveling Blocks,
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They are used exclusively in such equipment by:
American Well & Prospecting Co.
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Latex Iron & Steel Works, Inc.
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Get them in the first place;
Use them to replace
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Petrol Belt /
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In the Mid-Continent Fields at all branches and stores of WILLIAMSPORT WIRE ROPE CO.
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Manufacturers
Victor Balata and Textile Belting Co.
Main Sales Office: 38 Murray St., New York City
Factories: Easton, Pa.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

ESSENTIAL PARTS OF A PIPE STILL

What are considered to be the main parts or units of a pipe still?—L. T. A.

A pipe still unit is similar to that of battery or shell stills which are arranged for continuous operation. The method applied for making cuts is somewhat different so it is essential that quite definite arrangements of the parts be made. The oil is heated to a maximum temperature, then separation is made while the vapors pass through various stages of cooling.

The principal parts of a pipe still unit include the furnace, pipe in which the oil is heated, separator or expansion chamber for the vapors, exchangers and condensers for cooling the vapors and liquids, and means for circulating the residues. There are a number of ways in which these parts may be arranged and used. The modern pipe still, as built for the complete reduction of a crude oil, consists of a number of separators or towers from each of which it is possible to take off two or more cuts. The exchangers, through the use of either hot or cold oil, serve to control temperatures of the condensing vapors. Temperatures are also standardized through insulation of the towers, size of the towers, the introduction of liquid and indirect methods.

The first products to separate in a pipe still unit are those which boil at high temperatures; they are usually products of the fuel oil class. The last products are the most volatile and include gasoline. This treatment is the opposite of the ordinary practice, whereby the fractions from a shell still result from gradual heating and cooling; here the cuts or fractions are obtained b gradual condensation after extreme heating.

SODA ASH SOLUTION FOR FLOODING OIL SANDS

What is the theory for the use of soda ash in connection with the flooding of oil sands? Can you give me some information about the quantity necessary?—R. G. F.

The use of a solution of soda ash for flooding the oil sand in the Bradford district, Pennsylvania, was first suggested by Dr. P. G. Nutting of the United States Geological Survey. The details of the method were described in The Oil and Gas Journal, issues of July 29 and August 19, 1926.

It is explained by Doctor Nutting that any salt which hydrolizes to the hydroxide has been effective in driving oil from silicate (sand) formations, but that soda ash functions especially well. Other salts may be used if they have no objectionable properties. Some salts that would be otherwise satisfactory are corrosive and some are poisonous.

This work was started in 1925 in the Bradford area on the showing of complete recoveries when tests were made on a laboratory scale. The field tests have not been under way long enough for results to be obtained that will enable one to form a definite conclusion concerning the increased production made over that which has been demonstrated with the use of ordinary water.

The solution may be made in the proportion of from 40 pounds to the barrel of water up to approximately 70 pounds to the barrel, which is saturation. Doctor Nutting has stated that two or three tons to the well have been used where the wells were three locations to the acre. The rate of advance of the solution is 2 to 10 inches a day and the usual drive is 180 feet, so final results cannot be expected much inside of two years after the first test was made. A much longer period will be required in which to determine the value of this method for flooding and to decide upon the proper field technic. The cost of introducing the soda ash solution into the Bradford sand, which runs from 20 to 30 feet thick, has been about $200 for each well.

SUBSTANCES CAUSING CORROSION OF REFINERY EQUIPMENT

What substances are mostly responsible for the corrosion of stills and other parts of refinery equipment?—M. S. D.

There may be different substances in different oils which will cause corrosion. It was thought that the presence of salt was responsible for most of the corrosion but from recent experience of many refiners and the reports of numerous investigators, it appears that hydrogen sulphide is the chief cause of this trouble. Hydrogen sulphide is not always a direct product, found in the fresh oil, but may be formed during the refining operations. Some oils, such as that from the Texas Panhandle, contain but little total sulphur and after a short time in storage practically no hydrogen sulphide, however, large quantities of hydrogen sulphide are produced during the heating and treating stages. Many compounds containing sulphur will form from hydrogen sulphide under proper conditions. Oils are refined which contain large quantities, about 3 per cent of sulphur, and give no particular trouble because of corrosion. These facts suggest that it is the form of sulphur and not the quantity which favors the formation of hydrogen sulphide.

Free sulphur is formed from hydrogen sulphide, and other compounds of sulphur, and is thought to be the cause of corrosion in many instances. Uncombined sulphur melts at about 250 degrees Fahrenheit and will burn when heated to 491 degrees Fahrenheit. When free sulphur is present the low melting point permits it to be deposited in the cooler parts of the apparatus and to be quite generally distributed during the cooling stage when the stills are shut down. When the parts are again heated there may be some combination of the metal and the sulphur. Deposits of sulphur have been found on the vapor lines, returns, plugs, towers, expansion chambers, condensing system, and the tanks. Wherever the sulphur comes in contact with the metal there is liable to be some combination and therefore weakening of the metal. There is some sulphuric acid formed when oils containing sulphur are heated with the result that a series of products are generated from the corrosive action. Some of the hydrogen found in the gas from pressure stills is probably produced in this way.

There is some corrosion that may be caused by electrolytic action set up by bringing different metals together. Examples of this kind of corrosion are to be found in connections and gasket material.

The hydrochloric acid corrosion results from the presence of salts, such as sodium chloride, calcium chloride and magnesium chloride, commonly introduced through the water. This kind of corrosion takes place in the presence of water. Although the water may be separated from an oil the salt frequently remains suspended in the oil so that when steam is used in the still, the acid is formed and causes corrosion, especially in the cooler parts of the apparatus such as the condensing system.

GRAVITY OF SPINDLETOP CRUDE

What is the base of Spindletop (Texas) crude and what is the gravity?—D. R.

The crude oil obtained in the Spindletop district is of the asphaltic or naphthenic type. Since the deeper oil has been found the oil has changed in gravity. The first oil, produced around 800 feet, had a gravity close to 20; that found by the deep drilling, between 2,700 and 3,300 feet, has a gravity of about 27 and the oil being found below 5,000 is about 30 gravity A. P. I.

There has been recently issued a report of the Bureau of Mines giving analyses of Spindletop oil, by Kraemer and Grandone, Serial No. 2808.

LIGHT AND HEAVY ENDS AND FRACTIONAL DISTILLATION

I am just starting in the oil business and would thank you to explain what is meant by fractional distillation, light ends and heavy ends about gasoline and lubricating oils?—A. H. C.

All pure substances boil and form vapor at a definite temperature. Different conditions of pressure causes changes in the boiling point, or the temperature at which the substances evaporate. but under definite conditions the boiling point will always be the same for a given pure substance. Under normal conditions pure water boils at 212 degrees Fahrenheit, and it is possible under adequate conditions to condense the vapor, steam, when a known quantity of water is distilled so that the recovered liquid will correspond with the original substance both in volume and composition. Mixtures have a range of boiling points and the separation of the substances composing any mixture becomes more difficult the closer are the true boiling points of the components. Appreciable differences in volatility, which is another way of speaking of vaporizing or boiling point, of the liquids in a mixture make it possible to separate and purify them by distillation. The distilling operation is simply a method or means by which a liquid is heated, changed into vapor, the vapors cooled and the resulting liquid collected.

Petroleum is a liquid containing many different substances; it is a complex mixture of compounds called hydrocarbons which vary in properties. The hydrocarbons advance in weight and boiling point from the lower or light ones to the high and heavy compounds. The light hydrocarbons are gas and the boiling point if far below the freezing point of water; then the next heavier hydrocarbons are light liquids, such as are present in natural gasoline and motor gasoline; the boiling points getting higher as the weight increases; finally there are those hydrocarbons that may be separated from petroleum which are heavy and solid at ordinary temperature. The boiling point of the solid hydrocarbons are very high. A rough classification of the substances found in petroleum may thus be made into light and heavy ends.

The method for separating hydrocarbons has been suggested; however, many of the hydrocarbons have boiling points so close together that sharp and absolute sparation is not practicable. Commercial demands have caused the preparation of such products as gasoline, kerosene and lubricating oil. These are groups of hydrocarbons which are obtained by the process of distillation. They are collected in fractions and the process is known as fractional distillation.

There is another meaning to the terms light and heavy ends which is similar in principle to the above-described process. This is the use of these words when speaking of the volatility of gasoline. Gasoline is examined for volatility by distilling a portion under certain conditions. When this test is applied there will be a fraction collected between the temperature at which the liquid begins to boil and when 20 per cent of the liquid has condensed that may be known as the light end. At the end of the distillation some part of the gasoline may remain in the distilling flask, or the fraction collecting after 90 per cent of the gasoline has been distilled, that may be designated heavy ends.

NAPHTHENES ARE IMPORTANT HYDROCARBONS IN SOME GASOLINES

What is the reason why gasoline made from certain crude oils produced in California and Louisiana has high antiknock value? The gasoline made from these oils has a much lower gravity than the normal motor fuel but the endpoint is equally as low. Are these qualities due to refining methods or to the character of the oil?—D. R. H.

A similar question was asked a few days ago by one of our friends. We told him that certain peculiar properties of gasoline made from some oils which were found in Texas, Louisiana and California were due to the presence of hydrocarbons of the polymethylene series known as naphthenes. He replied with words to the effect that so far as he was involved, the question had not been answered. Therefore, we shall endeavor to explain something about naphthenes, which are the substances said to be responsible for the high antiknock value of the gasolines mentioned. Refining methods have nothing to do with the formation of the naphthenes in the specified crude oils.

While the compounds of carbon and hydrogen, hydrocarbons, found in Pennsylvania crude are essentially groups which are arranged in a continuous line, or straight chain; the groups are combined in the naphthene hydrocarbons in a ring or cyclic fashion. This arrangement of carbon and hydrogen makes it possible for less hydrogen to be present in a naphthene compound than in the corresponding open straight chain hydrocarbon. This structural form has effect on the behavior of the body. The naphthenes are not very active in their chemical properties; that is, for example, they do not explode, they burn at a normal rate. Under the pressure of the motor cylinder they have a tendency to retard sudden combustion and are therefore recognized antiknock compounds.

The naphthenes are usually found in greater quantities in the lighter products obtained from the crude, and in smaller quantities as the fractions become heavier.

Length 46 feet. Inside diameter 10 feet.
Wall thickness 2½ inches. Weight 166,000 lbs.

Safety and Savings by Smith

Because of the completeness and magnitude of the A. O. Smith Corporation's equipment and plant, Smithsteel Cracking Vessels can be obtained in less time than cracking stills made by other methods.

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Smithsteel Cracking Stills can be built to any diameter and length within transportation limits—and in any wall thickness within steel mill capacity.

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Smithsteel Cracking Stills have a continuous record of successful operation in the field under the most exacting and varied conditions.

Every Smithsteel Vessel is tested to pressures which may be three or four times as great as those which the vessel will encounter in actual operation. These tests are invariably made in the presence of purchasers' representatives.

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Smithsteel Cracking Stills do cost more than vessels made by some other methods. The extra cost is the price of safety.

More in a month than all others in a year

The A. O. Smith Corporation has delivered in a single month more pressure vessels for Oil Cracking than all other manufacturers of this type of equipment delivered in an entire year. These Smithsteel vessels were all 2" or over in wall thickness.

This indicates the degree to which the oil industry has standardized on Smithsteel Cracking Stills. Even more important to the refinery, it illustrates the complete and ready availability of Smithsteel Pressure Vessels for any cracking process.

A. O. SMITH CORPORATION *Milwaukee, Wisconsin*
Oil Field Products Division Los Angeles

SMITHSTEEL
CRACKING STILLS

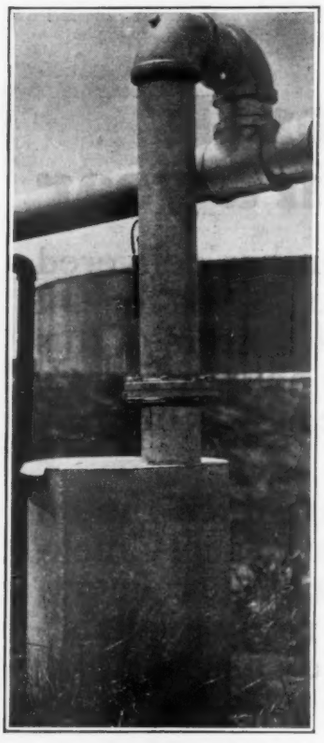
New Method of Reducing Evaporation

Standard of Kansas Uses One Balloon to Take Care of Breathing from Six Gasoline Storage Tanks

By C. O. Willson

NEODESHA, Kans., July 2.—The Standard Oil Co. of Kansas at its local refinery has perfected a new application of the breather bag method of reducing evaporation losses in gasoline storage tanks. Briefly described the installation consists of one breather bag or balloon to take care of the breathing of six large tanks. The balloon serves as a sort of "buffer" for the constant expansion or contraction of the tanks, the excess gas being absorbed by the gas recovery system. Conversely, if needed, the gas recovery system furnishes gas when the liquid and vapors contract.

Most refinery operators are familiar with the use made of balloons in previous installations. This method of lowering evaporation losses in storage tanks containing volatile refined products including crude oils was developed by the research department of the Standard Oil Co. of



Safety device installed on breather line of 55,000-bbl. gasoline storage tank.

Indiana. The equipment was perfected in 1923 and since that time numerous installations have been made at the company's refineries, including subsidiary organizations.

As installed at the Indiana company's refineries one balloon is generally used for two large gasoline tanks. The operating principle in those installations is simple. The gasoline and the gasoline vapors above the liquid level in the tank expand or contract with the changes in atmospheric temperature. The balloon—usually of about 18,000 cubic feet capacity—is direct connected to gas lines leading to the two tanks so that as the liquid and gas expand with the rising temperature the gas at a slight pressure flows to the balloon, the capacity of which is large enough to take care of the normal expansion from the tanks. In the same manner when the liquid and gas contract with the lower temperatures the gas from the balloon returns to the tanks.

Accurate data which have been compiled covering this application of the breather bag principle show that there is a large saving in evaporation losses. It has been found that by maintaining a slight pressure on the tanks the tendency of the gasoline to evaporate with the rise in temperature is lessened, thus reducing the volume of gas. The fact that gas already saturated with gasoline is returned to the tanks from the balloon when contraction takes place also is a factor in the reduction of evaporation losses. Unless some provision is made, air replaces the gas when the volume of the gas is reduced due to the lower temperatures or when the tanks are being pumped out. The presence of air in the tanks tends to hasten the rate of evaporation. Thus if tanks were air tight and equipped with a balloon of sufficient capacity to take care of breathing it would be possible to prevent all evaporation losses and maintain a product of constant specifications in storage.

Table showing evaporation losses of one 55,000-bbl. gasoline storage tank. Storage loss is recovered in refinery gas recovery system.

Date	Oil Temp.	Gals. at 70°	Gals. Loss From 5-21-26	% Total Loss	Distillation Grav.	IBP	%212	%221	%284	%392	Dry
5-21-26	71	2,177,994	.....	....	58.8	96	22.0	25.0	50.5	92.0	426
5-20-27	68	2,159,633	18,361	.843	58.8	104	21.0	24.0	50.0	91.5	426

Kansas Situation

When the management of the Standard Oil Co. of Kansas about a year ago decided to try out the breather bag principle it was expected that its installation would be similar to that of the Standard of Indiana just described. One balloon of 18,000 cubic feet capacity was installed. It was quickly found, however, that differences in atmospheric conditions between Whiting, Ind., and south Kansas were reflected in the breathing of the tanks. With the higher temperatures of Kansas one balloon not only failed to take care of the breathing of two storage tanks but it did not handle one tank in a satisfactory manner at all times.

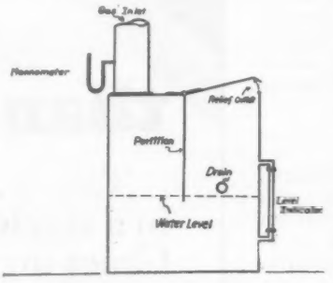
When it became apparent that there would be some excess gas from the balloon it was decided to prevent a waste of this gas by pumping it to the gas recovery system of the refinery which adjoins the tank farm. The success of this venture resulted in a second tank being added. Gradually additional tanks were tried out until now a total of six storage tanks—five 55,000-bbl. and one 34,000-bbl.—are connected to the one balloon.

The layout of the tanks, balloon and gas pump is shown in the accompanying diagram. All of the tanks have been in service for several years. They were made as gas tight as possible with steel roofs and welded roof seams. All of the tanks have steam line connections and also are connected with the plant's foamite system. An 8-inch gas breather line connects to each tank near the roof seam. Each of the breather lines connects to an 8-inch main line resting on the center dike and leading to the balloon house. The lines running from the tank to the main line each have a valve and a pressure and vacuum relief device.

Safety Device

These latter devices are made at the refinery shop from scrap material. The construction and operating features of the device are illustrated in the accompanying sketch and picture. They are used on many of the storage tanks of the refinery and tank farm. Their size varies with the capacities of the tanks.

Those used with the gasoline storage tanks are 36 inches high and 30 inches in diameter. Inside the cylinder shaped tank is the welded partition extending part way down the center. Located just inside the dike, the device is connected



Sketch of pressure and vacuum relief device installed on breather lines.

to the storage tank gas line with an 8-inch pipe. The device is filled with water during the summer months and an anti-freeze liquid during the winter so that the liquid level in one-quarter inch above the bottom of the partition. This provides two chambers, one of which is connected to the gas line as shown in the diagram and the other furnishes the opening for pressure or vacuum relief. The one-quarter inch liquid level provides for the three-eighth inch water level pressure at which the entire system is operated. The relief device will take care of any emergency condition which might arise in which there would be an abnormal rise in pressure or vacuum at any tank. The valve makes it possible to cut off a tank from the system when necessary.

Balloon House

The balloon house is of the gable type with sheet steel iron sides and roof. The dimensions are 30 feet by 48 feet by 21 feet 5 inches. Inside the house at about half the height is a 6-inch fabric belly-band clamped to the housing structure. This furnishes the main support for the balloon.

The balloon is cylindrical shaped with hemispherical ends. The 18,000-cubic foot capacity is obtained with a balloon which is 25 feet in diameter and 45 feet in length. It is connected to the fabric band previously mentioned so that the lower half of the balloon is held in position at all times while the upper half expands or contracts with the change in gas pressure. The inlet connection to the balloon is about 18 inches from the wood floor. This connection is taped so that it is gas tight.

Fabric Balloon

The balloon itself is made of cotton fabric impregnated with a mixture of glue and glycerol so that it is impervious to the gasoline vapors or any naphtha condensate which sometimes accumulates at the base of the balloon during cold weather. This naphtha with a rise in temperature again evaporates without damage to the balloon. The balloon at this plant has been in constant use for one year with no signs of appreciable deterioration at this time.

However, care has to be taken to protect the balloon from water as the coating is somewhat soluble in water. The inside of the ballon is protected from water by a water trap and drain on the gas line outside the balloon. The balloon is manufactured by the Goodyear Tire & Rubber Co. It is understood that the company now has perfected a balloon with an outside rubber coating which is water proof. The new type is said to be similar in construction to the gas bags of the modern dirigible.

Centrifugal Pumps

Outside the balloon house the main gas line is manifolded so that excess gas enters another 8-inch gas line leading to the pump house which adjoins the balloon house. A multistage centrifugal air compressor with a capacity of 250 cubic feet of gas per minute is used to pump the excess gas to the refinery's gas recovery system. The discharge line leading to the gas recovery system is 6-inch and about one-quarter mile in length. This line is manifolded at the pump house so that the suction and discharge connections can be reversed and gas pumped from the gas recovery system to the balloon and storage tanks. The compressor is driven by a 7½-horsepower motor.

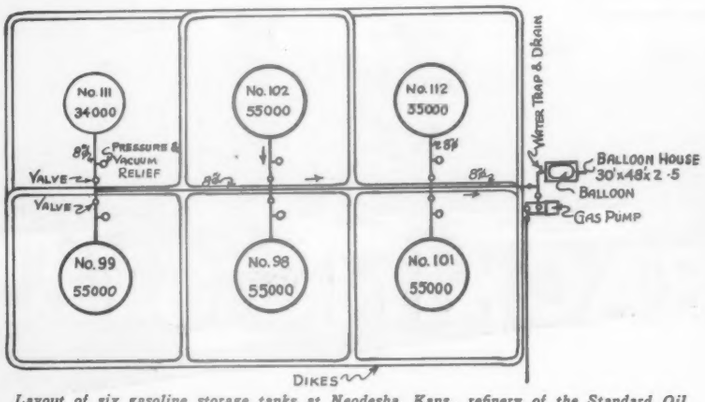
Operating Details

The services of one man are required during the day to operate the system. A check on the operations for a 24-hour period very clearly shows how sensitive the vapor pressure of storage tanks is to changes in atmospheric conditions. As previously stated the entire system is operated at a three-eighth-inch water pressure as gauged at the pump house. It is the duty of the operator to maintain this pressure by control of the compressor which boosts the gas to the gas-recovery system.

During the cold days of the winter months there is no excess gas for the compressor. During the spring season the amount of pumping necessary will vary widely. For instance, during May the pumping varied from 10½ hours on May 27 to 3½ hours on May 29. On the former day 60,685 cubic feet of gas was pumped to the gas recovery system and on the latter day 10,500 feet. The daily average for the month was approximately 30,000 cubic feet.

Dew on the tanks in the early morning, changes in the direction of the wind and rain are reflected in the amount of pumping necessary. A cloud causing the tanks

(Continued on Page 148)

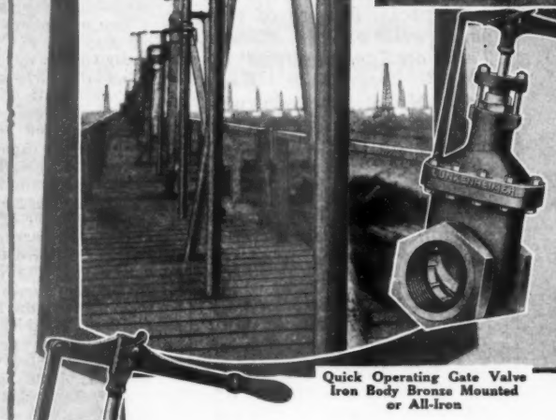


Layout of six gasoline storage tanks at Neodesha, Kans., refinery of the Standard Oil Co. of Kansas showing connections made to balloon to take care of tank breathing.

100%

Loading Rack of the Big Lake Oil Co., Best, Texas
Equipped with Lunkenheimer Valves

LUNKENHEIMER *equipped*



Quick Operating Gate Valve
Iron Body Bronze Mounted
or All-Iron

Quick Operating
"Clip" Gate Valve
Iron Body Bronze Mounted
or All-Iron

The Big Lake Oil Company at Best, Texas, has equipped its loading rack throughout with Lunkenheimer Iron Body Quick Operating Gate Valves.

The continued urge for more efficient production methods in the oil and gas industries is influencing a steadily increasing number of operators to rely upon Lunkenheimer Valves for maximum service with minimum maintenance expense.

Distributors located in all oil and gas centers carry complete stocks of Lunkenheimer Valves and Engineering Appliances. They will fill your requirements promptly.

Lunkenheimer Iron Body Gate Valves are fully described and illustrated in Gate Valve Booklets No. 505-511. Copies will be sent upon request without obligation.

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Of Interest to Sales Departments

Household Heating By Petroleum Coke Subjected to Test

The adoption of petroleum coke for household heating has been slow and although it should be given attention along with the increasing supply of coke and its cheapness, oil burning is overshadowing its importance. But a distinct field is open for the development of the uses of petroleum coke, away from competition with oil. The idea of oil heating appeals to those who can afford to have the best and are not willing to give attention to the furnace, expecting it to operate automatically. Many people can not afford to install oil-heating equipment, who do not object to giving the furnace a reasonable amount of attention, and who would use coke because of its cheapness compared to gas and because of its freedom from ashes, and less attention needed compared to coal.

This applies to homes equipped with furnaces, but there are many homes, particularly in the natural gas areas, now using stoves who would install furnaces if a cheaper fuel could be used than gas or oil and a more convenient and cleaner one than coal. Petroleum coke appears as the logical fuel.

The saving in the use of coke compared to natural gas has been impartially checked over the past four years in a Tulsa home and has been estimated at nearly one-half the usual gas bill. This is based on 57-cent gas and coke delivered at $8 per ton. Over last winter petroleum coke was used exclusively in

(Continued on Page 161)

UNION STANDARDIZES ITS SERVICE STATIONS

LOS ANGELES, Calif., July 2.—The Union Oil Co. is standardizing its service stations in order to secure the maximum benefit to be derived from advertising. In the past the Union's stations have not been uniform in either color or construction but from now on all equipment will be standardized. The advantage to be derived from this action is, of course, very obvious. The color scheme to be used is rather neat, the body of the station remaining white as at present.

The pumps which have heretofore been a gray are now being painted blue in order to afford a greater contrast. The shell housing the pumps dispensing Ethyl gasoline will be a combination of blue and white presenting a striped appearance. The lettering along the top of the station will be in blue and red with the base of the station to be terra cotta. No official announcement has yet been made by Union officials but since several paint brush crews started work two or three days ago it will no doubt be made in due course of time.

SMACKOVER PREMIUM

SHREVEPORT, La., July 2.—Helena Oil & Gas Co. the past week sold 100,000 bbls. of Smackover crude to the Missouri Pacific Railroad and Gulf Coast lines. The crude brought a premium of 10 cents above the posted price of $1.10. Delivery will start immediately.

MICHIGAN INSPECTION TAX

Oil companies shipping kerosene into Michigan will continue to pay an inspection fee of one-fifth of a cent a gallon during the next two years, as a result of the veto by Governor Green of the bill repealing the inspection on kerosene oil. The revenue from these collections is in excess of $100,000 a year.

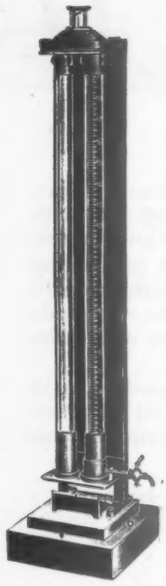
Short Talks on Specifications

By W. T. Ziegenhain

COLOR CONTROL OF LIGHT OILS

Because the public is influenced by color, in their purchases of gasoline and kerosene, refiners are obligated to meet certain standards. The general acceptance of color as an index of quality is an outgrowth of the time when only one method of refining was used and the presence of color in the gasoline indicated contamination by heavier oils. Now gasoline is made by many different methods and laboratory tests have been developed which more accurately measure quality by volatility and performance irrespective of color.

If color was the only requisite, heavy oils could now be chemically treated and made colorless and included in the gasoline. Furthermore, when gasoline is heavily treated with acid to improve its color, a large part of the unsaturated hydrocarbons having high antiknock properties are removed. This occasions a loss in power, added refining costs and a volume loss. But until the public is educated to the use of colored gasoline the control of color will continue to be of considerable importance.



Saybolt chromometer

The color control on gasoline, naphtha, kerosene and distillates is carried out by use of the Saybolt chromometer, shown in the accompanying print. In construction it consists of two glass tubes, 20 inches long, supported vertically. The left-hand tube is made of plain glass, open at both ends and at the lower end fits into a collar made to hold one or two color glasses shaped as discs. The other tube is closed at the lower end with a colorless plate and is provided with a draincock. This tube is graduated and holds the oil to be tested. The oil level may be adjusted by the draincock and read on the scale.

A mirror sets below the tubes and reflects light up through each tube, and into an optical prism eyepiece so constructed that when one looks down through the eyepiece the field appears as a circle, divided into two halves, the one side having the color of the column of oil in the tube and the other the color of the standard disc. Any change in the height of the oil will change the intensity of the color as the column of oil is shortened. Thus, by varying the oil level by draining through the outlet cock, the color in the two half circles can be matched and when this is done the height of the oil is recorded. A standard table converts the reading to the corresponding color shade and a portion of this table is shown below:

Discs Used	Height of Oil	Color Shade	
1	20	25	
1	18	24	
1	16	23	
1	14	22	
1	12	21	Water white
1	10¾	20	
1	9½	19	
1	8¼	18	
1	7¼	17	
1	6¼	16	Prime white
2	10½	15	
2	9¾	14	

This apparatus is standard throughout the industry and has been adopted by the A.S.T.M., the United States Government and the National Petroleum Association.

A NEW FEATURE

Starting with this issue The Oil and Gas Journal presents a news page of interest to its readers engaged in the sale of petroleum products. This page will appear regularly each week containing brief and timely articles dealing with the many phases of petroleum marketing.

A special feature of this page will be the "Short Talks on Specifications" by W. T. Ziegenhain. Each week Mr. Ziegenhain will describe one particular method of test explaining the procedure and apparatus used in nontechnical terms together with a discussion of its importance from the standpoint of the salesman.

Mr. Ziegenhain recently joined the editorial staff of The Journal after having had five years experience in the manufacturing department of one of the major organizations of the refining industry. While with this company he spent considerable time in correlating the work of the manufacturing and sales departments to enable salesmen to become familiar with the numerous tests around which the sale of its products centered.

PANHANDLE GASOLINE OUTPUT LESS IN MAY

AMARILLO, Tex., July 2.—Production of natural gasoline from 40 Panhandle plants was on a downward trend during May and declined approximately 700,000 gallons during that month in comparison with the April natural gasoline production reports. The decline was general in all counties save Wheeler County, which showed a light increase in production during May. At the same time, storage reports showed 1,375,000 gallons of natural gasoline in storage at the end of May. All but a few hundred barrels of that is stored in Hutchinson County.

Phillips Petroleum Co. was far in the lead in production, with approximately 4,500,000 gallons made in the five Panhandle plants. Skelly Oil Co. of Tulsa, Okla., was second in the list with better than 1,500,000 gallons production during May. The Phillips company's Pantex plant turned out the largest production with a report of approximately 1,300,000 gallons, and the same company's Borger plant was second with a production of 1,100,000 gallons.

Production in the five Panhandle counties is as follows:

	Gallons
Hutchinson County	6,800,000
Potter	45,000
Carson	827,000
Gray	921,000
Wheeler	143,000
Total	8,736,000

Natural gasoline in storage in Panhandle amounted to 1,380,000 gallons.

Two new plants were being built during May and one plant was shut down. Skelly Oil Co. was building, and has since completed, a five-unit absorption plant in the south half of Section 88, Block 4, I. & G. N. Survey. The plant will have a capacity for 20,000,000 feet of gas daily, and its capacity production is estimated at 20,000 gallons daily. The other plant being built is the Columbia Gasoline Co.'s charcoal absorption plant in the SE quarter of Section 46, Block 17, H. & G. N. Survey. Its capacity production is estimated to be around 6,000 gallons daily. The only plant shut down during the month was Union Gasoline Co.'s plant in the NW quarter of Section 8, Block Y, which had a rated capacity of 1,000 gallons daily.

It is estimated that the 40 Panhandle gasoline plants could use a volume of 612,000,000 feet of gas daily and produce 404,000 gallons of natural gasoline daily. The capacities, volume capacity and number of plants in various counties is as follows:

County—	Number Plants	Volume of gas	Capacity gasoline
Carson	6	86,000,000	68,500
Gray	5	35,000,000	28,500
Hutchinson	25	411,000,000	272,000
Potter	1	30,000,000	6,000
Wheeler	3	50,000,000	28,500
Total	40	612,000,000	404,000

SOVIET MANAGEMENT DENIES INFERIOR OILS

The Russian Oil Products, Ltd., of London, England, through its managing director, R. G. Terakopoff, has issued a statement relative to claims made by competitors that Soviet oils were inferior because of the failure of the Soviet Russian refiners to keep pace with technical developments.

The statement of Mr. Terakopoff says in part: "Despite the tremendous increase in the world's oil production the market for Soviet oil increases both in Great Britain and abroad. As for our imports into Great Britain—surely a reliable test of quality—the Board of Trade figures show that the 31.3 millions of gallons imported from Soviet Russia for the six months ending April, 1926, has grown to 62.5 million gallons for the same period ending April, 1927. The demand for Soviet oil is growing quicker than we can develop to meet it. Good and consistant quality is always the basis of a steadily growing demand."

BIG FOUR JOBBERS

A joint meeting of the Big Four Independent Jobber Associations, covering the states of Iowa, Kansas, Missouri and Nebraska, was decided upon at a meeting of the association secretaries June 20 at Kansas City. The convention will be held in Kansas City October 4, 5 and 6.

The Vogt WAX DISTILLATE CHILLING UNIT~

IN the treatment of distillate for separation of lubricating oils from by-products, low temperatures must be rigidly maintained. The Vogt exhaust steam refrigerating machine and Vogt standard chillers is the combination which, through years of service, has proved most satisfactory for this purpose.

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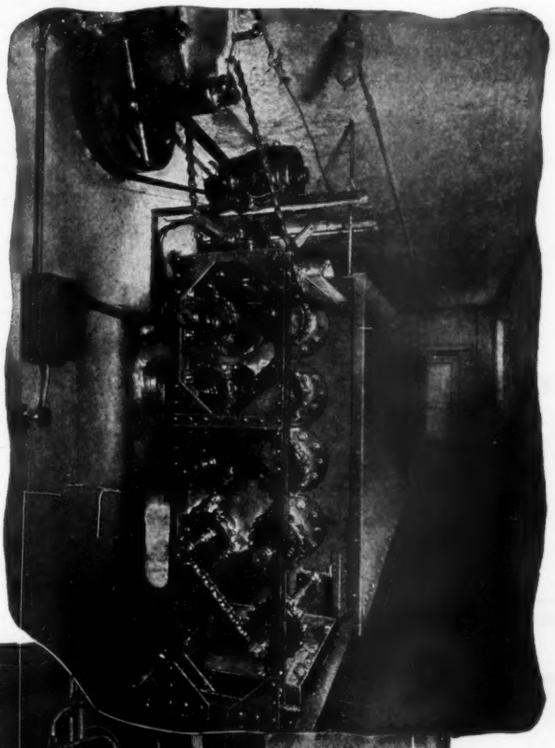

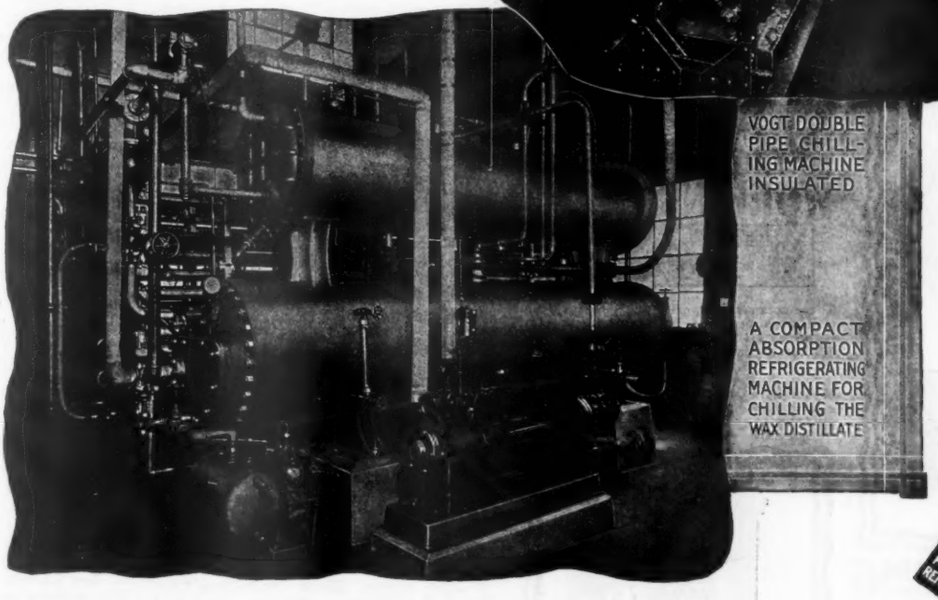
VOGT DOUBLE PIPE CHILLING MACHINE INSULATED
A COMPACT ABSORPTION REFRIGERATING MACHINE FOR CHILLING THE WAX DISTILLATE

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Manufacturers of OIL REFINERY EQUIPMENT, DROP FORGED STEEL VALVES AND FITTINGS, WATER TUBE AND HORIZONTAL RETURN TUBULAR BOILERS, ICE MAKING AND REFRIGERATING MACHINERY.

Ask your competitor—he uses them!

McKim Metallic Gaskets—Gas Engines—Compressors—Pumps—Refineries—Cracking Units

Catalog Number 17 on Request

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DETROIT, MICHIGAN

Manufacturers of McCord Force Feed Lubricators

12 SIZES FOR SHALLOW WELLS

MYERS SELF-OILING A REGISTERED TRADE NAME **HIGH PRESSURE POWER PUMPS**

Positive self-lubrication—housed working parts—extra large valves—increased volume—here are a few of the outstanding features of Myers Self-Oiling Power Pumps which have relegated old types of power pumps to the scrap heap. Twelve sizes now afford a wide range for choice. As a user of pumping equipment, you will be interested. *Catalog and information on request, or ask your jobber or supply house.*

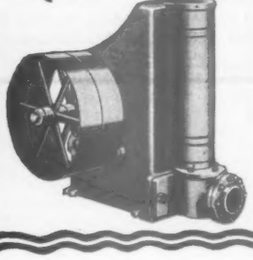
THE F.E. MYERS & BRO. CO.
ASHLAND, OHIO.
ASHLAND PUMP AND HAY TOOL WORKS

MYERS SELF-OILING A REGISTERED TRADE NAME **BULLDOZER DEEP WELL WORKING HEADS**

Take Off Your Hat To The MYERS
PUMPS — WATER PITCHERS — HAY TOOLS — DOOR HANGERS

These compact, powerful and efficient deep well working heads embody many special features, all of which are fully covered by letters patent. Every user of pumping equipment where deep well service is involved, should thoroughly investigate Myers Self-Oiling Power Working Heads—five sizes meet practically every requirement.

5 SIZES FOR DEEP WELLS



NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE—FIRST REPORTS

Carson County

Skelly Oil Co.'s No. 7 H. Schafer, 330 feet south and west of the NE cor. of Section 85, Block 4, I. & G. N. Survey.

Gray County

Roxana Petroleum Corp.'s No. 4 Combs & Worley, 330 feet south and east of NW cor. of Section 39, Block 3, I. & G. N. Survey. Sullivan and others' No. 1 A. Chapman-A, 330 feet north and west of SE cor. of S half SE, Section 7, Block 26, H. & G. N. Survey.

Hutchinson County

Roxana Petroleum Corp.'s No. 1 J. M. Sanford, 330 feet south and east of NW cor. of north 80 acres of south 400 acres of Section 85, Block 46, H. & T. C. Survey.

NORTH CENTRAL AND WEST TEXAS—FIRST REPORTS

Archer County

Atlantic Oil Producing Co.'s No. 5 L. F. Wilson-D, 150 feet south and 1,050 feet east of NW cor. of their 30-acre lease out of D. L. & C. Survey, A-109. Bridwell & Heydrick's No. 1 J. J. Perkins-A (W. F. Woodrum), 150 feet north and 660 feet east of SW cor. of Lot 59, Woodrum Subdivision out of Section 1, Hooper & Ward Survey, A-689. P. F. Gwynn & Reese Carter's No. 1 L. F. Wilson, 100 feet south and 150 feet east of NW cor., of SW SE, L. F. Wilson's 640 acre tract out of T. Toby Survey, A-646, being 60 feet north and 40 feet east of Carter & Balyeat's No. 1 Wilson. J. F. Barker's No. 1 Mrs. C. B. Edwards, 150 feet north and 750 feet east of SW cor. of Section 98, Block 4, Clark & Plumb Subdivision. Pandem Oil Corp.'s No. 1 T. L. Looney, 2,000 feet north and east of SW cor. out of Section 150, Club Ranch Subdivision.

Brown County

Forrest Oil Co.'s No. 1 A. A. Moore, 500 feet south and 1,270 feet west of NE cor. of A. A. Moore's 60-acre tract out of R. G. DeBard Survey, A-2,136; No. 4 E. L. Smith, 150 feet north and 2,480 feet east of SW cor. of M. L. Smith's 320-acre tract out of S. A. & M. G. Survey, No. 1, A-849. Fred Mullendick's No. 5 C. D. Stone, 525 feet south and 150 feet east of NW cor. of his 75-acre lease out of E. T. R. R. Survey, No. 157; No. 6, 150 feet south and east of NW cor. of his same 75-acre lease. Gibson Oil Corp.'s No. 10 J. W. Shore, 1,650 feet south and 150 feet north of NW cor. of east 80 acres of north 160 acres of J. C. Ryan Survey, No. 635. Gibson and others' No. 1 E. G. Wright, 155 feet south and west of NE cor. of south 60 acres of E. C. Wright's 100 acre tract out of S. A. & M. G. Survey, No. 3, A-850. Humble Oil & Refining Co.'s No. 18 Roy Hickman, 1,500 feet south and 450 feet west of NE cor. of their 160-acre lease out of Thomas Benson Survey, No. 783; No. 19, 500 feet south and 450 feet west of NE cor. of their same 160-acre tract. J. K. Hughes' No. 17 J. W. Shore, 150 feet north and west of SE cor. of west 80 acres of north 160 acres of J. C. Ryan Survey, No. 635; No. 19, 150 feet north and 1,350 feet east of SW cor. of west 80 acres of north 160 acres of same survey. Kone Production Co.'s No. 3 Roy Hickman, 750 feet north and 5,270 feet west of SE cor. of Thomas Benson Survey, No. 783, being 750 feet north and 150 feet west of SE cor. of their 164-acre lease. McGinley and others' No. 1 P. Davis, 150 feet north and west of SE cor. of north 25 acres of east 40 acres of the N-half of S. A. & M. G. Survey, No. 1, A-849. McLester Oil Co.'s No. 9 T. J. Clark, 200 feet north and 1,210 feet east of SW cor. of east 100 acres of T. J. Clark's 160-acre tract out of J. P. Triplett Survey, A-1,957. Selby Oil & Gas Co.'s No. 3 H. J. Ellis, 150 feet south and 750 feet east of NW cor. of H. J. Ellis' 130-acre tract out of S. A. & M. G. Survey, No. 3, A-550. Sinclair Oil & Gas Co.'s No. 8 J. W. Shore, 150 feet south and 1,350 feet east of NW cor. of their 80-acre lease out of J. C. Ryan, No. 635; No. 9, 150 feet south and 1,650 feet east of NW cor. of their same 80-acre lease. E. L. Smith Oil Co.'s No. 3 J. W. Newton, 300 feet north and 150 feet east of the most westerly SW cor. of J. W. Newton's 865-acre tract out of R. Honeycutt Survey, No. 623; No. 1 M. L. Smith, 150 feet north and east of SW cor. of north 60 acres of east 120 acres of M. L. Smith's 320-acre tract out of Section 1, S. A. & M. G. Survey, A-849. The Texas Company's No. 4 Hemp Byler, 450 feet north and 1,595 feet east of SW cor. of H. Byler's 260-acre tract out of T. & N. O. Survey, No. 43, A-914; No. 19 Roy Hickman, 750 feet north and 675 feet west of SE cor. of their 160-acre lease out of Thomas Benson Survey, No. 783; No. 77 Mrs. R. W. Lowe, 1,270 feet north and 2,365 feet east of SW cor. of George Stubblefield Survey, No. 622; No. 78, 1,270 feet north and 2,665 feet east of SW cor. of the same survey; No. 79, 1,270 feet north and 2,695 feet east of SW cor. of the same survey; No. 85, 160 feet north and 3,410 feet east of SW cor. of the same survey; No. 86, 410 feet north and 2,960 feet east of SW cor. of the same survey. Wentz Oil Corp.'s No. 22 J. W. Shore, 2,160 feet south and 450 feet west of NE cor. of west 240 acres of Charles S. Betts Survey, No. 625; No. 23, 1,710 feet south and 770 feet west of NE cor. of west 240 acres of the same survey. J. W. Campbell's No. 1 J. W. Matlock, 700 feet north 45 degrees east of the NE cor. of Reuben Rose Survey, No. 44, and located in Section 4, Brown County School Land. H. P. Evans and others' No. 1 W. I. Pittman, 1,100 feet south and 1,400 feet east of NW cor. of W. I. Pittman's 220-acre tract out of T. & N. O. Survey, No. 33.

Callahan County

L. G. Bradstreet's No. 1 J. H. Waller, 150 feet north and east of SW cor. of north 40 acres of J. H. Waller's 65-acre tract out of G. M. Virgal Survey, No. 798. Broderick & Calvert's No. 1 G. W. Fry, 600 feet north and 450 feet east of SW cor. of NW 50 acres of G. W. Fry's tract out of Section 265, S. P. R. R. Survey. R. E. Follin and others' No. 1 J. M. McCanlies, 1,000 feet south and 150 feet east of NW cor. of J. M. McCanlies Survey. Shadbolt & Creighton's No. 1 Mrs. W. W. Manning, 660 feet south and west of NE cor. NE SE, Section 78, Bayland Orphan Asylum Land. Shaw and others' No. 6 J. A. Miller, 2,315 feet north and 150 feet east of SW cor. of Section 98, Comal County School Land; No. 7, 2,615 feet north and 150 feet east of SW cor. of the same section. Valley Oil Co.'s No. 4 H. H. Ramsey, 450 feet north and 150 feet east of SW cor. NE Section 31, Deag & Dumb Asylum Land. Warren & Hays Oil Co.'s No. 2 P. C. Hatchett, 150 feet south and 450 feet west of NE cor. NW, Section 24, same asylum land.

Clay County

F. C. Crebin and others' No. 1 Roxie Prescott, 2,305 feet south and 1,475 feet west of NE cor. of Patrick Gilliland Survey, A-162, and located on the north line of Lot 13. M. T. McClure and others' No. 2 John Barry, Jr., 450 feet south and 150 feet west of NE cor. of south 30 acres of Lot 14, Section 2,642, T. E. & L. Survey.

Coleman County

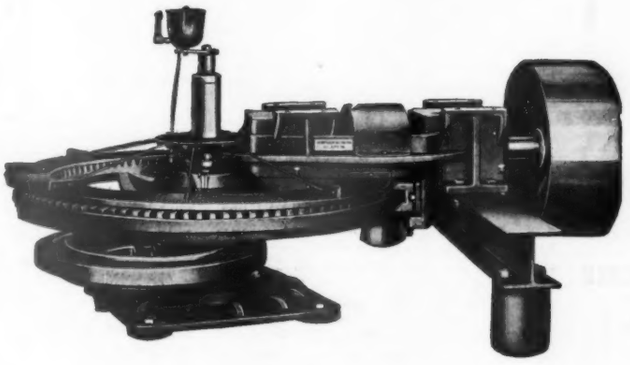
Illsing Production Co.'s No. 1 John W. Harris, 150 feet south and 450 feet west of NE cor. of O. H. Peters Survey, No. 175. Wise Oil Corp.'s No. 1 J. C. Dibrell, 3,050 feet north and 1,428 feet west of SE cor. of Hamilton Kegan Survey, No. 498. A. T. Allison's No. 1 George W. Fender, 800 feet south and 1,155 feet west of NE cor. of George W. Fender's 155-acre tract out of J. H. Bobington Survey, A-959.

Cooke County

Chapman & Lanier's No. 3 J. S. Montgomery, 750 feet south and 150 feet east

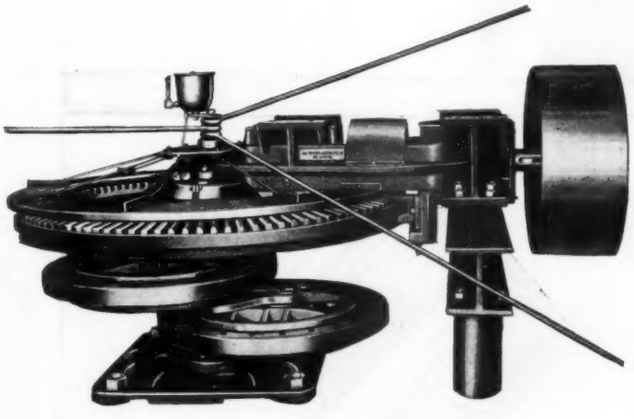
Reid Underpull Geared Powers

1 Eccentric 2 Eccentrics



The dust ledge on the eccentric, which serves to keep dirt and grit from the lubricating oil is one of the patented features of this power.

The Type PG Underpull Geared Power is well adapted for power work not heavy enough to require a band wheel power.



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of the most northerly NW cor. of their 70-acre lease out of T. J. Hutchinson Survey, A-484. Lynch, Stahl and others' No. 2 John Koelzer, 1,725 feet north and 115 feet east of SW cor. of their 10-acre lease out of John Koelzer's 80-acre tract out of Section 13, Thomas Scott Survey, A-900; No. 3, 1,412 feet north and 117 feet east of SW cor. of their same 10-acre lease. Oil Operators Trust Co.'s No. 6 Ben Luke, 170 feet north and 150 feet east of SW cor. of Block 88, Town of Muenster, being 80 feet north of No. 1. Stroube & Stroube's No. 3 John Koelzer-B, 170 feet north and 150 feet west of the SE cor. their lease "B" out of Section 13, Thomas Scott Survey, A-900, being 20 feet north of No. 1. Sun Oil Co.'s No. 2 J. Hooker, 150 feet south and 100 feet west of NE cor. of south 77 acres of J. Hooker's 115-acre tract out of Section 13, Thomas Scott Survey, A-900. The Texas Company's No. 1 J. Hooker, 730 feet south and 150 feet west of NE cor. of east 40 acres of J. Hooker's 115-acre tract out of Section 13, and the same survey.

Crane County

Carl Cromwell and others' No. 2 University Land, 990 feet south and 330 feet east of NW cor. SW Section 47, Block 30, University Land Survey; No. 3, 1,650 feet south and 330 feet east of NW cor. SW Section 47, Block 30, same survey. Simms Oil Co. & Atlantic Oil Producing Co.'s No. 6 University Land-D, 330 feet north and 1,650 feet west of SE cor. of Section 46, Block 30, same survey.

Culberson County

Scott & Dittman's No. 1 Miller, 1,160 feet south and 2,480 feet west of NE cor. of Section 1, Block 97, School Land Survey.

Denton County

H. E. Rondeau and others' No. 1 J. M. Owens, 150 feet north and 730 feet east of SW cor. of S. W. Lewis Survey.

Eastland County

Teatsworth and others' No. 2 Citizen's Water Works, 200 feet north and east of SW cor., Section 6, Block 6, E. T. R. R. Survey. C. C. Moorman and others' No. 1 Ed Thorp and others, 250 feet north and 200 feet east of SW cor. SE Section 456, S. P. R. R. Survey. Ross Drilling Co.'s No. 1 W. L. Barnett, 310 feet north and 326 feet west of SE cor. of south 20 acres of the W-half of W. L. Barnett's 165-acre tract out of Section 15, Block 5, H. & T. C. Survey.

Jack County

Nash & Windfohr's No. 1 J. A. Jones Est., 250 feet north and east of SW cor. of west 120 acres of north 240 acres of J. A. Jones Est., 640-acre tract out of Section 5, S. P. R. R. Survey, A-550. Seaboard Oil & Gas Co. and others' No. 1 J. W. Cullers and others, 150 feet south and west of NE cor. SE 60 acres of Section 4, S. P. R. R. Survey, A-2,188. Wynne & Millette's No. 1 Brentmore Inc., 1,300 feet north and 1,305 feet west of the most northerly SE cor. of Section 3, J. W. Williams Survey, A-877, being 150 feet south and east of the most northerly NW cor. of their 40-acre lease.

Jones County

Stebbins Oil Co.'s No. 2 G. H. Higgs, 450 feet north and west of SE cor. of Section 30, W. T. Scott Survey.

Montague County

Pure Oil Co.'s No. 2 W. W. Jones, 280 feet south and 150 feet east of NW cor. of Lot 37, William Donoho Survey, A-178.

Palo Pinto County

T. W. Owens and others' No. 1 H. L. Mosley Est., 10,600 feet north and 1,645 feet east of SW cor. of Allen Williams Survey, A-886.

Pecos County

The California Co.'s No. 1 G. I. Yates, 1,295 feet north and 1,275 feet west of the most northerly NE cor. of Section 33, and located in Section 34, Block 194, G. C. & S. F. Survey.

Tom Green County

Tulsa Oil Co.'s No. 1 Adams, C SW, Section 162, Block 11, S. P. R. R. Survey.

Upton County

L. E. Hults and others' No. 2 D. C. Giddings, 3,335 feet south and 6,675 feet west of NE cor. of League 1, Throckmorton County School Land. Pure Oil Co.'s No. 1 Ed. S. Hughes, 1,500 feet south and 2,015 feet west of NE cor. of south 300 acres of William Teer Survey, No. 4, A-806; No. 1 J. L. Love, 330 feet north and east of SW cor. of the N-half of Section 3, G. C. & S. F. Survey, A-212. Texas Pacific Coal & Oil Co.'s No. 1 A. S. Burleson, 330 feet south and west of NE cor. of west 120 acres of south 240 acres of J. Nidever Survey, No. 2, A-749.

Wichita County

Duncan & White's No. 1 R. Nitschke and others, 450 feet south and 150 feet west of NE cor. of R. Nitschke's 103-acre tract out of Section 2, League 4, Denton County School Land, A-417. T. G. Lomax, Jr.'s No. 1 Foster & Allen, 4,960 feet north and 480 feet west of SE cor. Foster & Allen's 800-acre tract out of S. Denison Survey, A-64. Panhandle Refining Co.'s No. 3 E. Daume, 450 feet south and 150 feet west of NE cor. of north 25 acres of west 110 acres of east 220 acres of the N-half of Section 1, S. P. R. R. Survey, A-266. R. G. Ridgeway's No. 2 L. M. Huddleston, 1,100 feet north and 160 feet west of SE cor. of north 40 acres of west 100 acres of east 200 acres of Section 22, H. & G. N. Survey, A-396. Jess Warren's No. 1 J. J. Perkins and others, 150 feet south and east of NW cor. of J. J. Perkins' 244-acre tract out of B. S. & F. Survey, A-485.

Wilbarger County

Consolidated Oil Co. & J. S. Cosden's No. 6 W. T. Waggoner, 300 feet south and 450 feet west of NE cor. NE NW. Section 57, Block 4, H. & T. C. Survey. F. Kelleher & D. Rubsana's No. 1 G. B. Ancell, 150 feet south and west of NE cor. of south 80 acres of the W-half of Section 13, Block 5, same survey.

Young County

Allday Oil Corp.'s No. 1 J. W. Davis, 750 feet north and 150 feet east of SW cor. of east 30 acres of west 80 acres of the S-half of Section 1,395, T. E. & L. Survey. C. P. Burton's No. 1 Mrs. A. L. Porter, 790 feet north of the south line and 600 feet west of the east line of W. Cantwell Survey, A-1,393. Ginsberg and others' No. 2 Mrs. J. M. Keen, 175 feet north and 150 feet west of SE cor. of north 50 acres of south 155 acres of Mrs. J. M. Keen's 510-acre tract out of Calv. B. & N. Survey, No. 4, A-119. Hamilton and others' No. 1 M. C. Robinson, 1,100 feet north and 450 feet east of SW cor. of Section 1,467, T. E. & L. Survey. Jetter and others' No. 2 J. R. Carvey, 150 feet north and west of SE cor. NE Section 1,857, same survey. Madden & Hunt's No. 2 O. S. Perkins, 810 feet south and 1,930 feet east of NW cor. of Section 207, same survey. E. F. Rose and others' No. 1 H. H. Butler, 150 feet south and east of NW cor. of north 66 acres of H. H. Butler's 115-acre tract, out of Section 3,401, same survey. Mid-Tex Oil & Gas Co.'s No. 2 Childress & Donnell, 655 feet south and 177 feet east of NW cor. of J. A. Morgan Survey, A-1,817. Pitzer & West and others' No. 1 A. M. Graham Est., 1,120 feet north and 200 feet west of SE cor. of Paul Pier Survey, A-219.

CORRECTED LOCATIONS

Brown County

Gibson Oil Corp.'s No. 4 J. W. Shore, 150 feet south and 450 feet east of NW cor. of south 80 acres of J. A. Ryan Survey, No. 635.

Callahan County

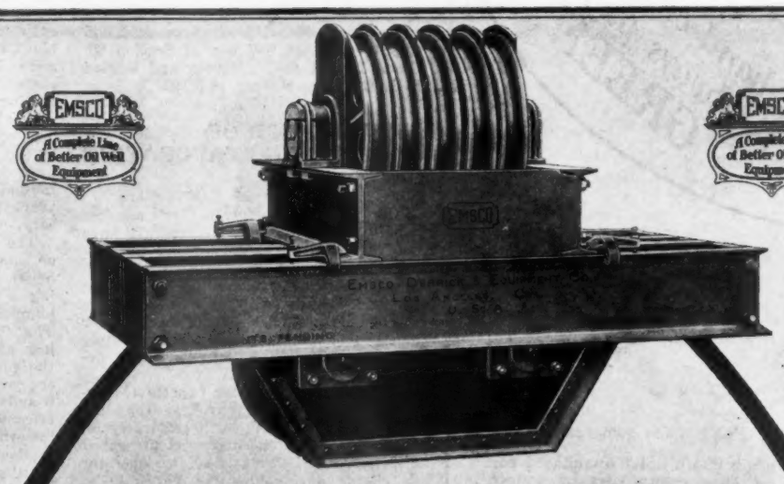
Hill & West's No. 1 J. H. Waller, 150 feet south and east of NW cor. of south 25 acres of J. H. Waller's 65-acre tract out of G. M. Vigal Survey, No. 798.

Reeves County

David R. Thompson's No. 1 A. A. Eddins, middle point of the east line of Section 10, Block 1-C, Public School Land.

Crane County

Landreth Production Co.'s No. 8 State Land, 200 feet south and 1,650 feet west of SE cor. of Section 46, Block 30, University Land and located in Section 20, Block F, C. C. S. S. & R. G. N. G. Survey. Simms Oil Co. and Atlantic Oil Producing Co.'s No. 3 University land, 330 feet north and 990 feet west SE cor. Section 46, Block 3, University Land;



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A NOVEL departure from the conventional design, embracing exclusive features which greatly improve former standards of safety and efficiency in service.

Compact assembly, with five 30" roller bearing casing sheaves set at right angles to derrick and sand line sheaves, practically eliminates all angles of casing lines; permitting much higher elevation of traveling block and materially increasing the life of these lines.

The higher elevation of the traveling block enables handling drill pipe in varying lengths up to thirty feet without difficulty or danger.

Fourteen 1¼" x 4½" hardened and ground roller bearings in each casing sheave, held by a bronze retainer. All sheaves Alemite lubricated.

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All sheave grooves are made to A. P. I. specifications. Weight complete 5,080 pounds.

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Cost less to use !

This hand chain Guide is always painted GREEN

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One is that it identifies a chain hoist unequaled for long, hard service on almost any sort of a job. Another reason is that it indicates what is probably the most important protective feature of any chain hoist made—the LOOP HAND CHAIN GUIDE.

This Guide, owned and used by ourselves and licensed for use on but few other chain hoists, is the only Guide that absolutely controls the hand chain while in motion. It prevents the hand chain from buckling or "gagging" in the guide—whether operated at the point of hoisting or at an angle from the hoist.

It has many other advantages about which we should like to tell you. Send for Catalog 7-B.

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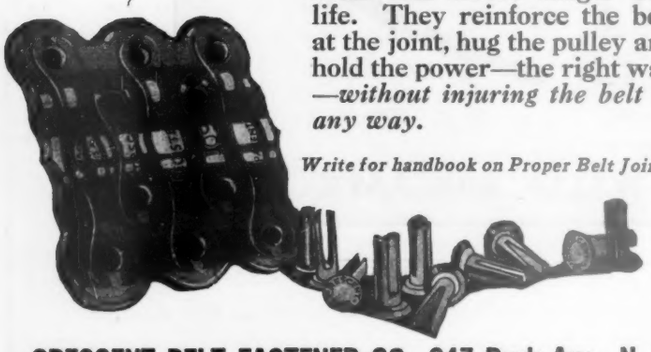
Write for handbook on Proper Belt Joining.



CRESCENT BELT FASTENER CO., 247 Park Ave., N. Y.

No. 4, 990 feet north and 330 feet west of SE cor. of Section 46, Block 30, same land; No. 5, 990 feet south and 330 feet west of NE cor. SE Section 46, Block 30, University Land.

Pecos County

Mazda Oil & Gas Co.'s No. 1 M. A. Smith, 330 feet south and 2,310 feet east of NW cor. NW Section 24, Block 194, G. C. & S. F. Survey. Mid-Kansas Oil & Gas Co.'s No. 3 I. G. Yates-A, 2,365 feet due west of SW cor. of Section 60, Block 1, I. & G. N. Survey and located in I. G. Yates Survey, A-8,195.

NEW METHOD OF REDUCING EVAPORATION

(Continued from Page 140)

to be shaded for only a few minutes usually means that the operator will have to shut down the pump and let the balloon take care of the contraction in the tanks. When the cloud passes and the sun strikes the tanks again the pressure very quickly comes back and the operator must start pumping again immediately to prevent "popping" of the safety devices.

The management later expects to perpect an automatic control so that the operation of the pump will be largely independent of the operator. At present it is believed desirable to have an operator in charge during the day not only to operate the pump but to look after other equipment.

The maximum expansion in the tanks generally comes from 10 a. m. to 2 to 3 p. m. Late in the afternoon there is a gradual reduction in the volume of gas pumped to the gas recovery system. The actual expansion in the tanks stops at about sundown. As now operated the one balloon will furnish the gas for all contraction in the tanks during the night. The operator leaves when it is apparent that it will not be necessary to do any more pumping.

Situations in which it is necessary to pump gas back from the gas recovery system to take care of the liquid and gas contraction in the tanks are rare. These generally come during the day and are brought about by a sudden change in temperature. A heavy rain during a hot day has necessitated pumping gas into the system to supplement the supply in the balloon. Removing a large amount of gasoline from the storage tanks under certain conditions will necessitate gas being returned to the balloon and tanks to replace the liquid volume loss.

Gas Recovery System

The 6-inch line leading to the refinery from the tank farm discharges into a 20-inch galvanized line which goes to the refinery absorption plant where the gasoline is extracted from the gas in the usual manner. An interesting feature of the gas recovery installation is the provision made to take care of four large work tanks. Two of these tanks are used for gasoline and two for crude oil. These tanks are frequently filled or emptied. The gas lines for these tanks connect to a main line which in turn connects to the 20-inch galvanized line at the same header as the 6-inch line from the gasoline storage tanks.

The gas recovery system is operated so that a slight pressure is maintained on the gathering lines at all times. This permits the gas to flow freely from or to the work tanks. The fact that the excess gas from the balloon is being pumped into the gas recovery system does not interfere with this equilibrium between pressure and vacuum. It so happens that most of the gasoline loading at the refinery is done during the day so that it is necessary to furnish the tanks with gas to replace the liquid volume loss. The excess gas from the balloon during the day assures an adequate supply.

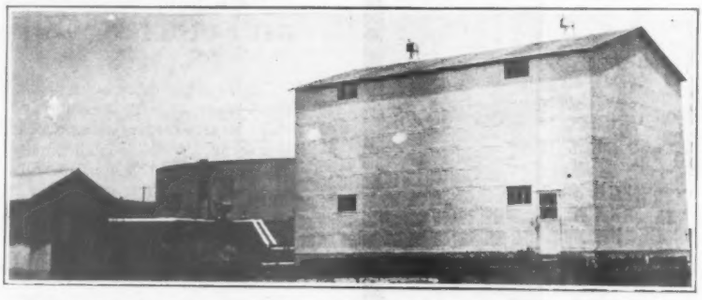
Savings

From the information already given plant operators will be able to approximate the construction and operation costs. The entire installation costs including gas line connections, gas pumps and balloon totaled approximately $8,000. The operating factor is largely confined to the labor cost of the one operator on duty during the day. Manufacturers of the balloon state that it can be used four years before replacement will be necessary.

The company has an excellent check on one tank containing gasoline meeting 58-60 U. S. Motor specifications covering a year period. No gasoline was pumped from this tank during the year. The following table shows the volume loss and the change in specifications of the gasoline. The .843 per cent loss for the year contrasts with losses as high as 6 and 7 per cent in tanks at other refineries where no care is taken to reduce the evaporation losses. In this connection it should be borne in mind that anly a small part of the .843 per cent is actually loss due to the fact that the bulk of this gasoline is recovered at the gasoline absorption plant. It also will be noted that there was not enough change in the comparative distillation ranges to affect the market value of the gasoline.

INTERNATIONAL WELLS IN COLOMBIA AND PERU

International Petroleum Co., Ltd., subsidiary of Imperial Oil, Ltd., completed nine wells in Colombia in May, averaging 1,180 bbls. daily initial flow. Eight additional wells are being drilled. In Peru, the company completed 21 wells in April and is drilling 30 wells. Production in Colombia in April totaled 1,007,500 bbls., average of 32,500 bbls. daily, compared with 1,052,236 bbls., average of 33,943 bbls. daily, in March and 175,180 bbls., average of 5,839 bbls. daily, in April, 1926. Of company's total Colombia production in April, 591,000 bbls. were imported into the United States.

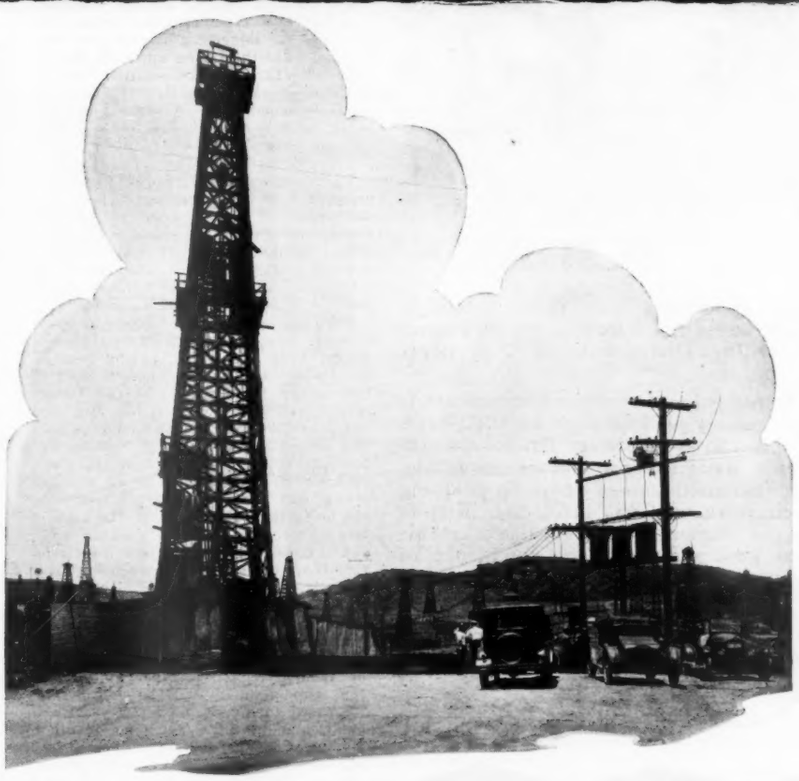


View showing balloon house, pump house and one of the six large gasoline storage tanks.

Production of the International in Peru totaled 697,500 bbls. in April, average of 22,500 bbls. daily, against 775,000 bbls., average of 25,000 bbls. daily, in March, and 750,000 bbls., average of 25,000 bbls. daily, in April, 1926.

HUMBLE LINE PROGRESS

SAN ANGELO, Tex., July 2. — Progress on the McCamey to Corpus Christi pipe line being built by the Hercules Oil Co. is being made on schedule, according to G. A. Lee, in charge of the division between McCamey and Kerrville. His headquarters is at Sonora. Fifteen miles of 12-inch pipe had been laid. None of the 10-inch pipe has been laid. There are between 300 and 400 men working in the McCamey to Kerrville division. More trouble is being experienced in laying the pipe in Edwards County than was expected, Mr. Lee said. Two tons of dynamite were required to blast open a 1-mile ditch in that section.



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IT takes courage and perseverance to drill over 8,000 feet for oil. And it takes more than ordinary steels to stand the gaff of such deep drilling. That's why Agathon Alloy Steels were used. They wear rock while the roughnecks wear smiles, no matter how deep the drilling job. The success of the Midway Oil Company in drilling their famous Olinda 96 well was in a large measure due to the Agathon Alloy Steels used in bits and drilling equipment. If they'll chew their way a mile and a half into the ground, think how these super-drills would stand up under the severest drilling operations you have.

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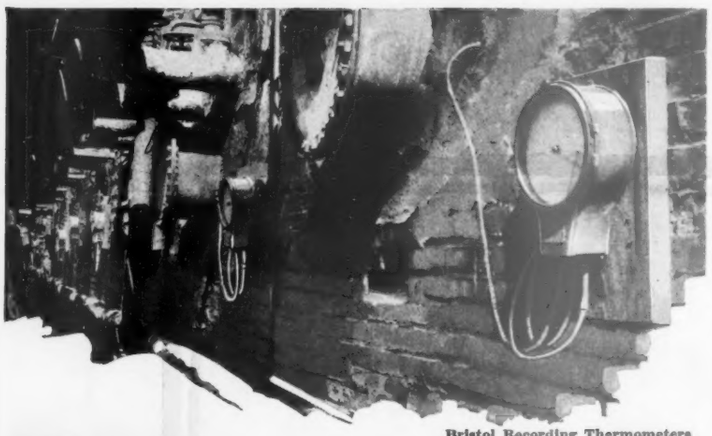

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The most extensive line of Recording Instruments; including recorders for Pressure, Liquid Level, Temperature, Electricity, Motion, Speed, Humidity, etc.

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Still operations run more smoothly when under the watchful eye of Bristol Recording Thermometers. They never sleep.

The ruggedness of these instruments is particularly well attested by the photograph above—showing Bristol instruments designed for indoor mounting, but mounted out-of-doors and doing their work well day after day, in spite of the elements. It is service like this that gets and holds the confidence of refinery engineers.

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IN the production end of the oil game you need every possible friendly agency that you can command to help you keep out of the red ink column. A breakdown of production machinery often means a serious breakdown of profits — lost production time, expensive repairs and high labor costs.

In production machinery Champion Drop Forgings play a large part in preventing breakdowns, keeping up production and cutting repair costs. Their tough, give-and-take strength and sturdy stamina impart to the vital, load-bearing parts of production equipment the ability to carry on day in and day out.

Champion Drop Forgings are friends to your pocketbook. Be sure to specify them in new equipment or for replacement parts in old machinery.

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CHAMPION DROP FORGINGS

Germany's Progress In Bergius Process Of Liquefying Coal

Progress in the application of the Bergius process for the liquefying of coal in Germany is reported by a correspondent to the South Wales Journal of Commerce writing from Berlin:

The annual report of the German Chemical Dye Trust mentions briefly the fact that the liquefying of coal has been commenced at the Leuna works, in Merseburg. The Leuna works acquired fame as the seat of the production of synthetic nitrate during the war. They are situated in central Germany, between the two big cities so closely connected with the lignite industry, Halle and Leipzig.

The Chemical Trust, trading under the name of I. G. Farbenindustrie, possesses the patent of the Bergium process for home and abroad. Besides, it has obtained the license of the Fischer-Thopsch process, and it has now been able to develop its own process, advantages which place it in a very powerful position.

Through its synthetic nitrate process, the dye trust produces unlimited quantities of hydrogen, which, having been so far a surplus by-product, is now used in hydrogenating 1,000 kilos of raw lignite coal into 490 kilos of coal oil, 210 kilos of gas and 300 kilos of tar residue. Under this process the 490 kilos of coal oil will be separated into 350 kilos of heavy oil, 80 kilos of heating oil, and 60 kilos of grease oil. The 350 kilos of heavy oil can be further separated into 150 kilos of benzine and 200 kilos of Diesel oil.

It is claimed in well-informed circles that the process has been much improved recently, and that semicoke, hitherto sold as a substitute for coke and as pulverized fuel, is now convertible into oil.

It is further stated that the Leuna works are now able to produce at the rate of 120,000 tons of oil per annum, but that this quantity will be considerably increased during the next few years. In 1925, amount 1,200,000 tons of oil to a value of $48,600,000 were imported from abroad; of this consumption the present output capacity of the Leuna works is thus about 10 per cent. It is stated that the production of 1 ton of oil raffinate costs about 90 marks ($21.84) but that it may be reduced by about $3.60 when the necessary power is obtained through the same process. The selling price varies between 140 ($33.32) and 190 ($45.22) marks, according to the different products, but would be very remunerative even if considerably reduced.

The Ruhr coal industry is also very busy introducing similar schemes of liquefaction. A company has been formed by all the leading mining companies in order to install a coal hydrogenerating plant of the latest design to serve as a trial plant. If the experiment succeeds, other installations will follow, and there are some who foresee through this process a time when not only Germany, but the whole of the Continent, will become self-supporting in the supply of oil. In that event, liquefaction would revolutionize the whole structure of the coal industry, and perhaps be a mass of permitting collieries to sell their coal far below their working costs, the chemical side providing the necessary funds for its well being.

REPORT IN BRAZIL SEEPAGE

A Reuters Trade Service message from Sao Paulo says: The recently reported petroleum discovery in Brazil is of greater interest than was anticipated. Dr. J. Camargo Rangel, chief engineer of the Companhia Brasileira de Oleos Combustiveis, having made a careful examination of the oleaginous matters, pronounces if of a very high density. The discovery took place at Guaratingueta, in the eastern part of the State of Sao Paulo, and 124 miles northeast of the capital. The district is served by a branch of the Brazil Central Railway. While some workmen were making excavations in the garden of a house for the installation of lightning conductors they encountered an oily seepage at a depth of 3 meters from the surface.

TEXAS, LOUISIANA AND ARKANSAS STOCKS GAIN

HOUSTON, Tex., July 2.—Total crude in storage in steel and earthen tanks in Texas, Louisiana and Arkansas fields on June 1 aggregated 97,551,108 bbls., an increase of 6,730,948 bbls. over the figures of May 1. The following tables show the accumulations in each field as compared with May 1 last:

STOCKS OF CRUDE JUNE 1, 1927

GULF COAST

Pool—	Steel	Earthen
Boling	33,975	.....
Batson	3,000	.....
Big Creek	62,770	.....
Barber Hill	1,000	.....
Damon Mound	12,650	.....
Dayton	2,100	.....
Goose Creek	142,260	133,340
Humble	606,760	2,132,050
Hull	465,350	1,900
Jennings (La.)	47,560	.....
Lockport (La.)	260,570	.....
Markham	27,540	.....
Orange	181,355	28,000
Pierce Junction	61,790	.....
Spindletop	4,876,830	.....
Saratoga	215,000	.....
Sour Lake	2,168,128	1,692,880
West Columbia	1,331,660	823,900
Vinton (La.)	299,470	.....
Totals	10,799,768	4,812,070
Grand total June 1		15,611,838
Grand total May 1		15,356,840
Increase		254,998
Grand total June 1, 1926		12,299,970

Miscellaneous

Stocks of light gravity crudes in storage in tank farms adjacent to refineries and shipping terminals on the Gulf are as follows:

Baytown	1,974,700
Webster	1,447,000
Englewood	1,493,215
Norsworthy	404,000
Sinco	699,725
Texas City	205,000
Pasadena	211,600
Total June 1	6,435,240
Total May 1	7,132,000
Decrease	696,760

SOUTHWEST FIELDS

Luling	587,470
Lockhart	7,900
Laredo-Mirando	1,381,350
Total June 1	1,986,720
Total May 1	1,904,360
Increase	82,360

NORTH CENTRAL TEXAS

Eastland and Stephens Counties	7,981,710
Burkburnett	1,144,770
Electra	576,015
Petrolia	30,675
Archer County	205,210
Vernon	92,690
Nocona	106,320
Total June 1	10,137,390
Total May 1	9,541,440
Increase	596,450

EAST CENTRAL TEXAS

Powell	2,782,745
Mexia	9,003,000
Total June 1	11,785,745
Total May 1	11,757,060
Increase	28,685

PANHANDLE AND WEST TEXAS

Panhandle	18,000,000
Reagan, Crane, Upton, etc.	3,060,350
Total June 1	21,060,350
Total May 1	17,594,010
Increase	3,466,340

NORTH LOUISIANA-ARKANSAS

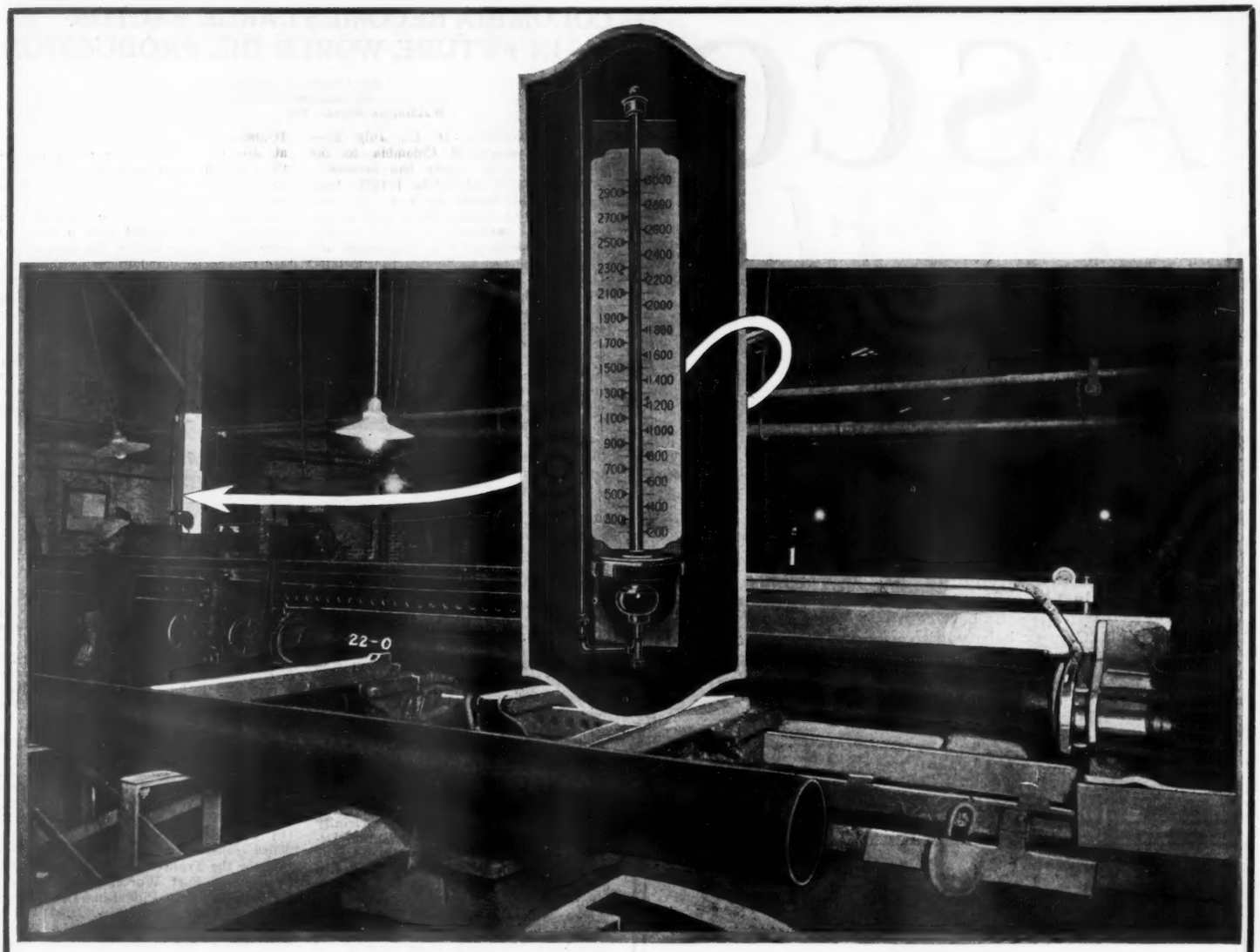
Bull Bayou, Crichton, Shreveport	5,452,600
Haynesville	3,933,340
Homer	3,032,480
Cotton Valley	511,210
Bellevue	310,675
Urania	82,350
Total June 1	13,322,655
Total May 1	11,285,560
Increase	2,037,095
Smackover (Ark.)	14,619,980
El Dorado (Ark.)	2,377,890
Nevada County (Ark.)	216,800
Total June 1	17,214,670
Total May 1	16,248,000
Increase	965,670

SUMMARY

Gulf Coast	15,611,838
Miscellaneous (Gulf Coast)	6,435,240
North Central Texas	10,137,390
East Central Texas	11,785,745
Southwest Texas	1,986,720
Panhandle and West Texas	21,060,350
North Louisiana	13,322,655
Arkansas	17,214,670
Total June 1	97,551,108
Total May 1	90,820,160
Increase	6,730,948

RUMANIA REDUCES DUTY

The Rumanian export duty on gasoline has been reduced from 7,000 to 300 paper lei per carload (10 tons) and the export duties on refined heavy lubricating oils and gas oil from 1,500 to 300 paper lei per carload.



A Mercury Gauge Checks This Test

To hydrostatically test pipe is usual mill practice. South Chester goes a step further. Knowing the unreliability of spring pressure gauges, Chester has installed mercury columns on its hydraulic testers. By this means the chief operator can always check the man who applies the pressure, for the mercury column is as accurate as a thermometer. And Chester tests EVERY length on hydraulic testers equipped with mercury columns. The use of the mercury gauge is only one of the EXTRA precautions that Chester is taking to safeguard the oil operator in his use of its products.

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E. H. Bosches, 2024 Houston Post Dispatch Bldg., Houston, Texas

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United Oil Well Supply Co. 908 A. G. Bartlett Bldg. Los Angeles, Calif.

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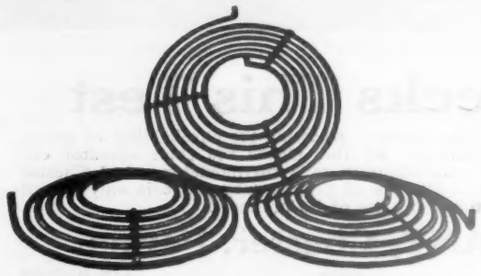

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COLOMBIA BECOMES LARGE FACTOR IN FUTURE WORLD OIL PRODUCTION

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 2.—The contribution of Colombia to the world petroleum supply has become a large factor in estimating future world production, although it is a little less than one year since the first shipment of crude oil was made from that country. This is the view of experts of the Minerals Section of the Department of Commerce backed by figures to substantiate it.

During the first four months of the present calendar year exports from Colombia totaled 3,329,276 bbls. of petroleum, most of which went to the United States with smaller quantities for Canada, Cuba and South American countries. April shipments from Colombia amounted to 793,120 bbls. which was slightly larger than those for March.

Crude oil exports from Cartagena to the continent of Europe were begun April 11 with the shipment of 14,128 bbls. Consignments of crude oil had previously gone to Southampton, England. That was in October, 1926. In a statement obtained from the minerals section on this subject it is said:

"The first month's exportation, in July, 1926, amounted to 795,000 bbls., a larger amount than was shipped during any of the months immediately following. The largest monthly exportation so far recorded was 1,061,713 bbls. in November. High point for monthly production was 1,012,423 bbls. in September, 1926, the subsequent figures fluctuating considerably although up to that point the 1926 months had shown a steady increase. A total production of 6,443,527 bbls. was obtained in 1926, compared with 1,006,708 bbls. in 1925 and 444,744 bbls. in 1924, and smaller amounts in preceding years. There is only one producing company, which is operating in the vicinity of Barranca Bermeja and Infantas, Department of Santander, the central part of the country. Exploration continues in other sections, three being principally favored by general opinion—that near the coast of the Caribbean, west of the Magdalena River, the Magdalena Valley proper and the southeastern part of Colombia.

"The completion of the pipe line from Barranca Bermeja to Cartagena Bay, considered the largest single achievement of the petroleum industry in Colombia during 1926, brings the upper Magdalena Valley closer to tidewater and encourages exploitation in that section. The construction of this line was commenced in March, 1925; it extends about 325 miles from Mamonal, near Cartagena, to the connecting line which runs to the Tropical company's wells. The new line is made of 10-inch steel tubes and has a capacity, with all eight pumping stations going, of about 30,000 bbls. per day. It began to operate in May, 1926, and is now being enlarged by a "looping" system intended to give it a transportation capacity of about 50,000 bbls. in 24 hours. This additional capacity is supposed to become available in July of the current year. The usual difficulties of constructing such a line were aggravated in this case by the necessity of cutting away tropical jungle growth.

"There is a shortage of labor in Colombia which considerably affects petroleum operations, both directly and indirectly, through the resultant shortage of food and other supplies. Its effect on agricultural development is considered to be partly responsible for the present high cost of living. Some of the conservative newspapers are now advocating the admission of foreign laborers, hitherto prohibited, to relieve industrial and living conditions brought about by the lack of workmen to keep up the work on the farms and in camps.

"One of the conspicuous problems of the petroleum industry at present is the congestion of traffic on the Magdalena River. It is reported that more than 100,000 tons of import cargo are lying at different ports awaiting transportation up the river, while many of the boats which have been around during the first months of the year, and have just been released by the rising water, must go into dry dock for cleaning and repairs. It is claimed that a year or more will elapse before the cargo now held can be delivered to its destinations. While this situation does not directly affect the transfer of oil, the suspension of incoming supplies adds to the other difficulties of operation in the interior of the country. The industry was also held up for a time at the beginning of 1927 by a disastrous fire at Girardot, where the destruction of oil tanks aggravated the gasoline shortage already prevailing at Bogota."

BENEDUM LEADS PARTY INSPECTING PROPERTIES

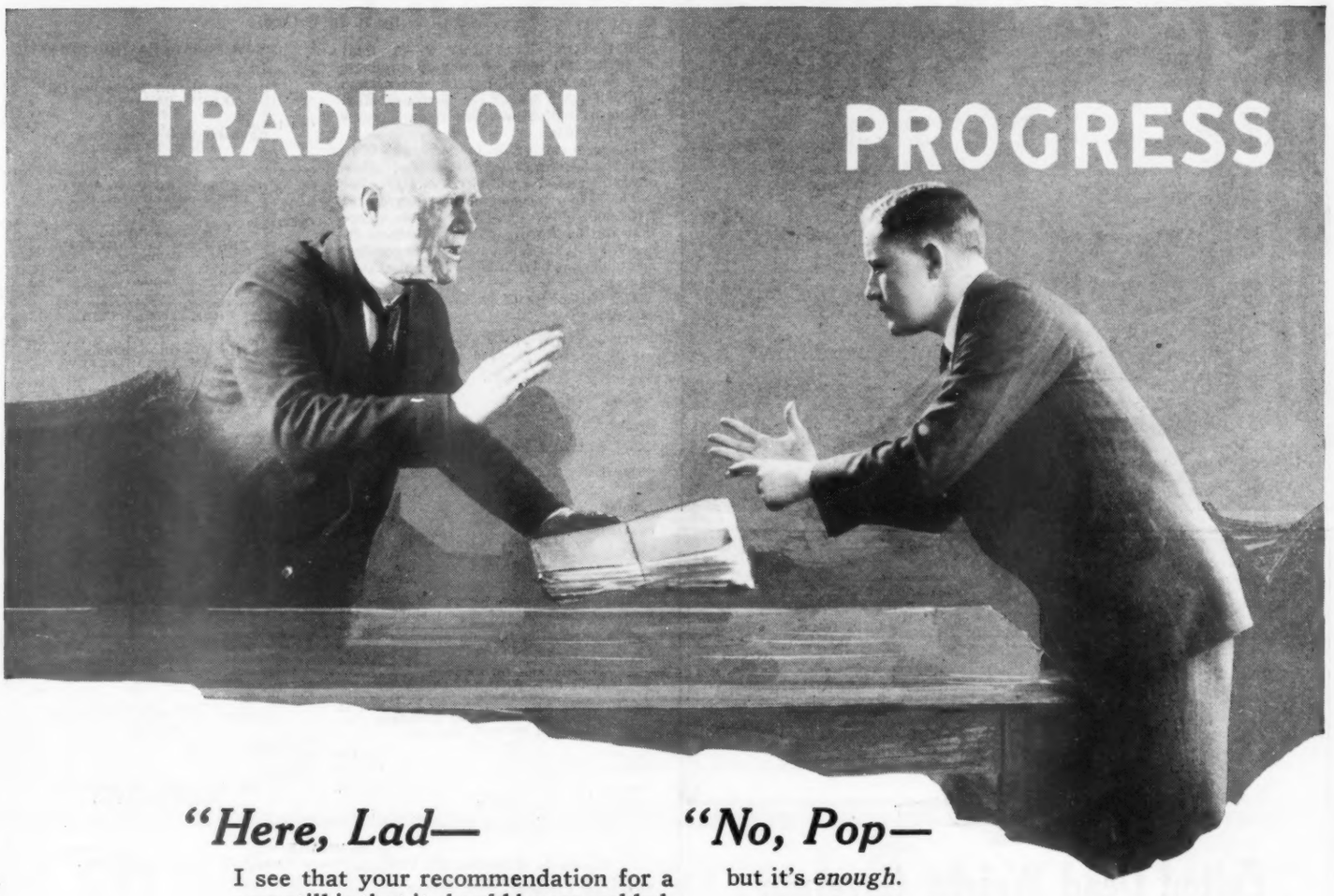
FORT WORTH, Tex., July 2. — A party of oil men and eastern financiers, headed by M. L. Benedum of Pittsburgh, Pa., has been visiting the Big Lake Pool in Reagan County and the Yates Pool in Pecos County looking over properties in which the Plymouth Oil Co. and the Transcontinental Oil Co. are interested. Plymouth is owner of a three-quarter interest in the Big Lake Oil Co. Transcontinental is half owner with the Mid-Kansas (Standard of Ohio), in the Yates Pool.

Those in the party, which is going on to Tulsa, Okla., include: F. P. Parriott, president of the Transcontinental; C. H. Huston, chairman of the board, Transcontinental; Nelson Phillips, chief counsel of the Transcontinental and Big Lake Oil Companies in Texas; John Ford, Tulsa, general superintendent of production for the Transcontinental; H. D. McCracken of Fort Worth, vice president, United Producers Pipe Line Co., Transcontinental subsidiary; A. B. Dally, Pittsburgh, vice president of the Transcontinental, Big Lake, Arkansas Fuel Oil and Arkansas Natural Gas Companies and a director of the Plymouth. Howard C. Ingles and Julian M. Gerard, New York; J. C. Adams, Tulsa, vice president and general counsel for Transcontinental; John C. Laing, Charleston, W. Va., director of Plymouth; H. B. Davenport, Charleston, W. Va., director of both the Big Lake and Plymouth companies; John Kirkland, Wheeling, W. Va., stockholder in the Plymouth; Fred W. Miner, Pittsburgh, vice president, Pittsburgh Oil Development Co. and an official of the National Tube Co.; M. W. Bottomfield, Tulsa, vice president, Transcontinental; Julian Stein, C. Prevose Boyce, C. Pitts Raleigh, and Charles W. Hoff, all of Baltimore, Md.; Roy C. Hennan, Tulsa, chief geologist of the Transcontinental; A. B. Robb, Pittsburgh; Harry M. Blair, LeRoy Frost, Jr., and V. W. Miller, all of New York; R. B. Upham, Chicago; James Bruce, Baltimore; Warren Gorrell, Chicago; C. K. Bowie, Baltimore; A. C. Woodman, New York; J. G. Farquhar, Pittsburgh, vice president, Plymouth Oil Co.; Levi Smith, president of the Big Lake Oil Co. and A. C. Stearns, general manager of the Big Lake Oil Co.

NOT PESSIMIST ON OIL, SAYS BLAIR & CO. HEAD

The oil industry should be in a very healthy state by fall, said Elisha Walker, president of Blair & Co. He added: "I am not pessimistic on the oil situation as many others in Wall Street are. With increased gasoline consumption and more conservatism in drilling of new wells, the oil industry will become much more stabilized. General business conditions are perfectly satisfactory."

Pop Is Opposed to Any Kind of Change



"Here, Lad—

I see that your recommendation for a new still is that it should be arc welded, in order I suppose, to save money.

Why should we depart from usual practice just to save a little money?

I don't want it—money, Lad, isn't everything."

"No, Pop—

but it's *enough.*

If everyone thought as you do about it—then the hundreds of our leading manufacturers of tanks, trucks, pipeline fittings, stills, harps and general parts around the refinery would still be charging us for punching holes out of metal and trying to get the strength back by sticking in a lot of rivets. They would be selling us plate about twice as heavy as necessary because of the strength they punched out along the edges.

Because you *doubt* arc welding is no reason why it isn't *right*—especially since your doubt is based on prejudice.

You must be Scotch, Pop, you won't *give* me even the benefit of a doubt."

A new textbook on Arc Welding (Price $1.50) will be sent on approval for five days to any executive requesting it.

Book size, 6"x9"—Total pages, 160—Number illustrations, 200—Charts, 62—Divisions, 8.

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Clean-pure sparkling water ready to drink at all times. No matter where you are, the GOTT Water Can is health insurance.
Comes in 1½, 3, 5 and 10 gallon sizes. Your supply store has them.
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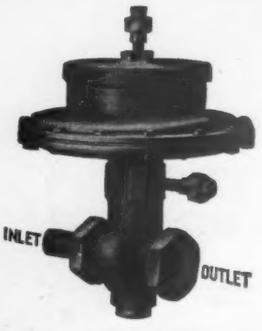

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An unusually sensitive, frictionless and long-lasting governor to be used either as a direct governor, or for individual service. Maintains a uniform pressure throughout the entire range of flow.

Send for full particulars!

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Oil Equipment For Sale!

We have just purchased all the pipe and fittings belonging to the Kansas Oil Refining Company's plant at Coffeyville, Kansas, and have for sale:

25000 feet 2-in. line pipe
60000 ft. 3-in 8 thd. line pipe
20000 ft. 4-in 8 thd. line pipe.
10000 ft 6¼-in 13-lb Casing, (used as line pipe)
3000 ft. 8-in 8 thd. line pipe
1000 ft. 10-in 8 thd. line pipe

20 8-in Gate Valves
100 6-in Gate Valves
900 4-in Gate Valves
800 3-in Gate Valves
1000 2-in Gate Valves
500 2-in Stop Cks.

Also: Several thousand Fittings and Nipples from ⅛-in to 10-in.

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GULF PORT SHIPMENTS IN MAY; CRUDE INCREASE; PRODUCTS DECLINE

By P. L. McGreal

HOUSTON, Tex., July 2.—A total of 16,762,109 bbls. of refinery products and crude were shipped by water from the Gulf ports during the month of May. Compared with April, this is an increase of 72,129 bbls.

The refinery products decreased 974,046 bbls. from the April figures, while crude increased 1,046,175 bbls.

The export consignments aggregated 2,154,809 bbls., or 428,912 bbls. more than during April. Refinery products increased 430,314 bbls., and crude consignments declined 1,402 bbls. from the April figures.

The shipments of each company were as follows:

By The Texas Company
FROM PORT ARTHUR
Refined

Coastwise	1,264,774
Export	452,727
Total	1,717,501
Crude	
Export	24,351

By Gulf Refining Co.
FROM PORT ARTHUR
Refined

Coastwise	2,456,637
Export	68,203
Total	2,524,840
Crude	
Coastwise	78,516

By Magnolia Petroleum Co.
FROM BEAUMONT
Refined

*Coastwise	†1,245,645

*Magnolia company makes no distinction between coastwise and export shipments.
†Approximately 496,353 bbls. of the total was manufactured fuel oil.

Crude

Coastwise	1,002,953

By Sun Oil Company
FROM SUN AND SABINE PASS
Crude

Coastwise	715,782

By Standard Oil Co. of Louisiana
FROM BATON ROUGE
Refined

Coastwise	542,174
Export	133,411
Total	675,585
Crude	
Coastwise	78,521

By Crown Central Petroleum Co.
FROM PASADENA (HOUSTON)
Crude

Coastwise	149,527

By Atlantic Oil Producing Co.
FROM BEAUMONT
Crude

Coastwise	238,632

By Atlantic Oil Producing Co.
FROM ATRECO
Crude

Coastwise	232,084

By Atlantic Oil Producing Co.
FROM SMITH'S BLUFF
Crude

Coastwise	124,324

By Pure Oil Co.
FROM SMITH'S BLUFF
Refined

Coastwise	163,423
Crude	
Coastwise	698,212

By Swiftsure Petroleum Co.
FROM TEXAS CITY
Crude

Coastwise	235,791

By Humble Oil & Refining Co.
FROM TEXAS CITY
Crude

Coastwise	2,075,840

By Humble Oil & Refining Co.
FROM BAYTOWN
Refined

Coastwise	1,515,691
Export	1,131,357
Total	2,647,048
Crude	
Coastwise	855,824

By Humble Oil & Refining Co.
FROM INGLESIDE (MIRANDO CRUDE)
Crude

Coastwise	202,919

By Humble Oil & Refining Co.
FROM NECHEL TERMINAL (ORANGE)
Crude

Coastwise	90,373

By Sinclair Refining Co.
FROM HOUSTON (SINCO)
Refined

Coastwise	389,025
Export	140,760
Total	529,785
Crude	
Coastwise	292,160

By Galena Signal Oil Co.
FROM HOUSTON (GALENA)
Refined

Coastwise	108,000
Export	154,000
Total	262,000

By Deepwater Oil Refineries
FROM HOUSTON
Refined

Export	50,000

SUMMARY

Shipments of Refined and Crude by Water From Gulf Ports During May, 1927

Company and port—	Refined	Crude	Total
The Texas Company, Port Arthur	1,717,501	24,351	1,741,852
Gulf Refining Co., Port Arthur	2,524,840	78,516	2,603,356
Magnolia Petroleum Co., Beaumont	1,245,645	1,002,953	2,248,598
Sun Oil Co., Sabine Pass and Sun	.....	715,782	715,782
Atlantic Oil Producing Co., Beaumont	.....	238,632	238,632
Atlantic Oil Producing Co., Atreco	.....	232,084	232,084
Atlantic Oil Producing Co., Smith's Bluff	.....	124,324	124,324
Pure Oil Co., Smith's Bluff	163,423	698,212	861,635
Humble Oil & Refining Co., Neches	.....	90,373	90,373
Swiftsure Petroleum Co., Texas City	.....	235,791	235,791
Humble Oil & Refining Co., Texas City	.....	2,075,840	2,075,840
Humble Oil & Refining Co., Baytown	2,647,048	855,824	3,502,872
Humble Oil & Refining Co., Ingleside	.....	202,919	202,919
Sinclair Refining Co., Houston	529,785	292,160	821,945
Galena Signal Oil Co., Houston	262,000	.....	262,000
Deepwater Oil Refineries, Houston	50,000	.....	50,000
Standard Oil Co. of Louisiana, Baton Rouge	675,585	78,521	754,106
Totals for May	9,815,827	6,946,282	16,762,109
Totals for April	10,789,873	5,900,107	16,689,980
Difference	974,046	1,046,175	72,129
EXPORTS			
The Texas Company	452,727	24,351	477,078
Gulf Refining Co.	68,203	.....	68,203
Humble Oil & Refining Co.	1,131,357	.....	1,131,357
Sinclair Refining Co.	140,760	.....	140,760
Galena Signal Oil	154,000	.....	154,000
Deepwater Oil Refineries	50,000	.....	50,000
Standard Oil Co. of Louisiana	133,411	.....	133,411
Total for May	2,130,458	24,351	2,154,809
Total for April	1,700,144	25,753	1,725,897
Difference	430,314	1,402	428,912

SOVIET UNION REPORTS INCREASED PRODUCTION

WASHINGTON, D. C., July 2.—Oil production in the Soviet Union for April was 833,057 metric tons, compared with an average monthly production of 821,000 metric tons for the preceding six months and 661,008 metric tons for April, 1926, according to advices received by the Soviet Union Information Bureau. The increase, compared with April, 1926, was 26 per cent. Oil exports for April were 166,026 tons, compared with 171,823 tons in March and 120,601 tons in April, 1926.

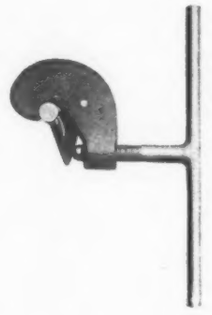
The oil industry reports great gains in mechanization and working efficiency. During the past three years the monthly output in the Baku fields has increase 65 per cent, while the working force at the wells has been reduced by 40 per cent. The cost of boring has been decreased from over $50 per foot in 1923 to about $28 per foot last year.

DRILLING IN ANGOLA

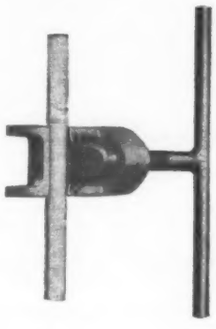
With comparatively dry weather for this time of the year, the drilling work of the Cia. de Petroleo de Angola, in the Amboim section, Portuguese, West Africa, is progressing rapidly. One dry hole has been completed to a depth of 1,300 feet since January 1. A second hole was last reported down 400 feet, and a third was recently spudded in. Drilling on the location about 70 kilometers north of Loanda is progressing slowly as the caving formation which has been encountered makes work difficult. This well is down 1,300 feet and is to go another 500 feet before the test is completed.

The *Improved* Ratigan Polish Rod Clamp No. 2

Stronger—More Efficient—Easier to Apply
The Fastest Clamp Built



Ratigan Polish Rod Clamp, Improved



Recent improvements in the Ratigan Polish Rod Clamp No. 2 have added greatly to its efficiency. It is much stronger than before and will now hold a longer string of rods with much less effort. Due to the compound leverage resulting from its construction, Polish Rods, Sucker Rods and Sand Lines may be clamped instantly and positively without the necessity of using a "Snipe."

The Ratigan No. 2 is the fastest clamp built. It is light but sturdy, and is easy to apply or remove. It retains its efficiency for an almost indefinite period because it will not spread under the most severe conditions.

This clamp is made in two sizes, "Light" for wells up to 2000 feet deep, and "Heavy" for any depth. It is furnished with either the "T" Handle, as illustrated, or with the "Vise" type Handle if desired. Send today for complete details on the improved Ratigan Polish Rod Clamp No. 2.

J. P. Ratigan
1213 Santa Fe Avenue Los Angeles Calif.

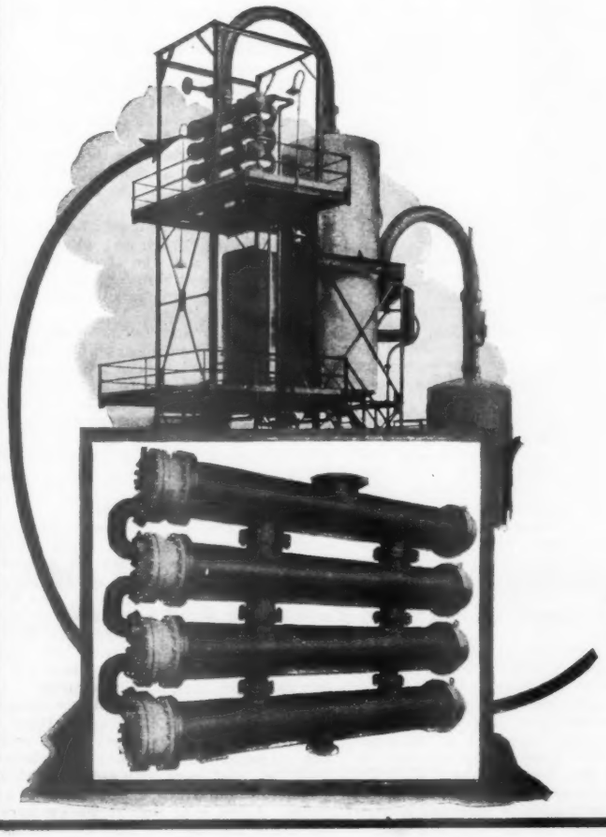
Mid-Continent & Rocky Mountain Fields:
Frick-Reid Supply Company

East of the Mississippi:
All Supply Houses

California Fields:
Oil Well Supply Company
The National Supply Company
The Republic Supply Company
Associated Supply Company

If It's a "SUREGRIP" It's SURE SAFE

The G-R Sectional Condenser



The sectional arrangement of this condenser provides many special operating advantages. Sections can be added to or removed to meet varying capacity requirements. The complete unit is readily transported and re-assembled if necessary to meet changing plant conditions. Inspection and cleaning are greatly facilitated.

There are many additional advantages in the special design and construction of the G-R Sectional Condenser. Its special features are concisely described in leaflet which will be sent on request.

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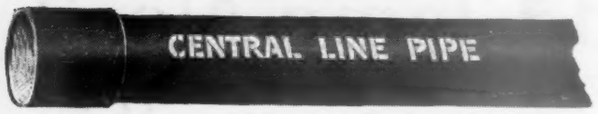

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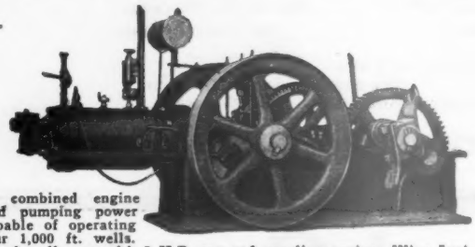

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AVIATION ADVANCED FIVE YEARS BY LINDBERGH'S GREAT FEAT

By N. O. Fanning
New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, July 2.—That the Lindbergh nonstop New York-to-Paris airplane flight has advanced aviation five years is the opinion of aviation men here. They forecast for aviation the same future which the automobile business had 10 years ago; in other words, that in 10 years airplane transportation will have advanced relatively as far as automobile transportation has today.

This does not mean that everyone will own and operate airplanes in 10 years just as they do motor cars now; aviation will never correspond directly with motor car transportation, in as much as the airplane is adapted for certain forms of transportation, just as the motor car is adapted for certain kinds. The airplane is especially adapted to quick long distance transportation. The real value of the airplane is found in supplementing motor car transportation, just as the motor car has supplemented, and not replaced, railroad transportation.

The startling effect of the Lindbergh flight is seen in actual plans now made, as a result of it, to inaugurate new airplane routes. The success of the Chamberlin flight cannot be underestimated as a boon to aviation, as it strengthened the evidence that the airplane can accomplish what aviation men had claimed. So now, immediately following these two history-making flights, we find plans in the making for airplane services throughout the world that would otherwise not have been thought of.

Chief Director Merkel, of the Lufthansa, German commercial aviation combine, is quoted as saying that the chief problem of transatlantic service is that of perfecting motors to the point where their consumption would be small enough to permit airplanes to carry a high proportion of "paying" load instead of being forced to carry practically nothing but gasoline, as is the case at present.

"America, Germany, France, Great Britain, Italy and Spain all are working on the problem of building reliable long distance and weight carrying planes for transatlantic service," he says, "when the mechanical problems are solved there will be no difficulty in obtaining the money necessary to finance such service."

New Air Route Planned

The first business deal looking toward regular transatlantic air service was announced in Paris June 11. A cablegram received in the French capital addressed to Latecoere French Air Line confirmed ratification by the president of the Argentine Republic of a contract by which the French company agrees to reduce from 21 to 9½ days the delivery of mail between France and Argentina, first by a combined air and water route and eventually by the air route exclusively.

Orders have been placed for material to install airdomes on the Cape Verde Archipelago, off the coast of Africa; on the Island of Fernando do Noronha, off the coast of South America, and at Pernambuco, chief port of call for recent air expeditions from South Africa to South America.

Of the 7,500 miles to be covered from France to South America, all but 1,400 will be covered by air for the present, and the rest by fast boats. It is hoped that before the end of another year—by 1929—planes will carry the mail the entire distance between Paris and Buenos Aires. The hop from Cape Verde to Fernando do Noronha has been made several times by aviators, particularly during the past few months, but is still the most difficult stage of the journey between the two hemispheres.

M. Latecoere, the founder of the company, started in 1919 with a limited service between Toulouse and Algeria and Morocco. Last year his company carried 5,426 passengers and 109 tons of mail, extending its lines as far as Dakar. More than 6,000,000 letters were delivered in Africa last year by its pilots.

Flying Lieutenant J. Van Onlangs, of the Soesterberg military airdrome of Holland, fired by the accomplishments of Lindbergh, Chamberlin and Levine, plans to fly in October from Holland to Dutch Guiana, in South America, by way of Casablanca and Dakar, Africa, across the Atlantic to Pernambuco, Brazil, thence to Paramaribo, capital of Dutch Guiana, a total distance of 7,000 miles.

Van Onlangs' attempt will coincide with a 10,000-mile flight to Java by Lieutenant G. A. Koppens. They are planned for the purpose of demonstrating that Holland is not behind in aerial communication with distant colonies. Apart from these flights, aviation has become tremendously popular in Holland.

British Activity

Aerial activity in Great Britain is featured by the race around Britain of 32 Royal Air Force giant bombing planes. They will race for two days. Stops will be allowed for refueling only, so the race will be a day and night endurance test for both crews and engines. There will be intervals of six hours between the planes of each of the four competing night bombing squadrons. Thus a ceaseless stream of airplanes will roar around Great Britain for 48 hours.

The prominence given to this pre-eminently military display is symbolic of aerial development in the United Kingdom. Whatever encouragement the Government has given to aviation has been along the lines of developing aircraft as a means of attack and defense. But the achievements of Colonel Lindbergh and Clarence Chamberlin in flying the Atlantic will serve a useful purpose in stimulating interest in purely civil aviation, it is believed.

Sir Arthur Whitten Brown, who, with Sir John Alcock, made the first nonstop flight across the Atlantic eight years ago, says in the "Weekly Despatch" of London: "Without being in the least dogmatic, I am certainly confident that within a short time, perhaps a very short time, we shall think no more of passengers flying regularly to New York than today we think of them flying regularly from London to Paris or from London to Berlin.

"But so far as one can anticipate, the future seems to me to indicate that transatlantic air passenger service will be an affair of airships rather than airplanes. Take the element of risk. We are mourning the loss of the gallant Nungesser and his comrade. I do not attach much credence to the theory that they ran into a snowstorm. An airplane travels too fast for snow to lodge easily on its wings. Engine trouble in mid-Atlantic seems a more feasible explanation of their tragic failure.

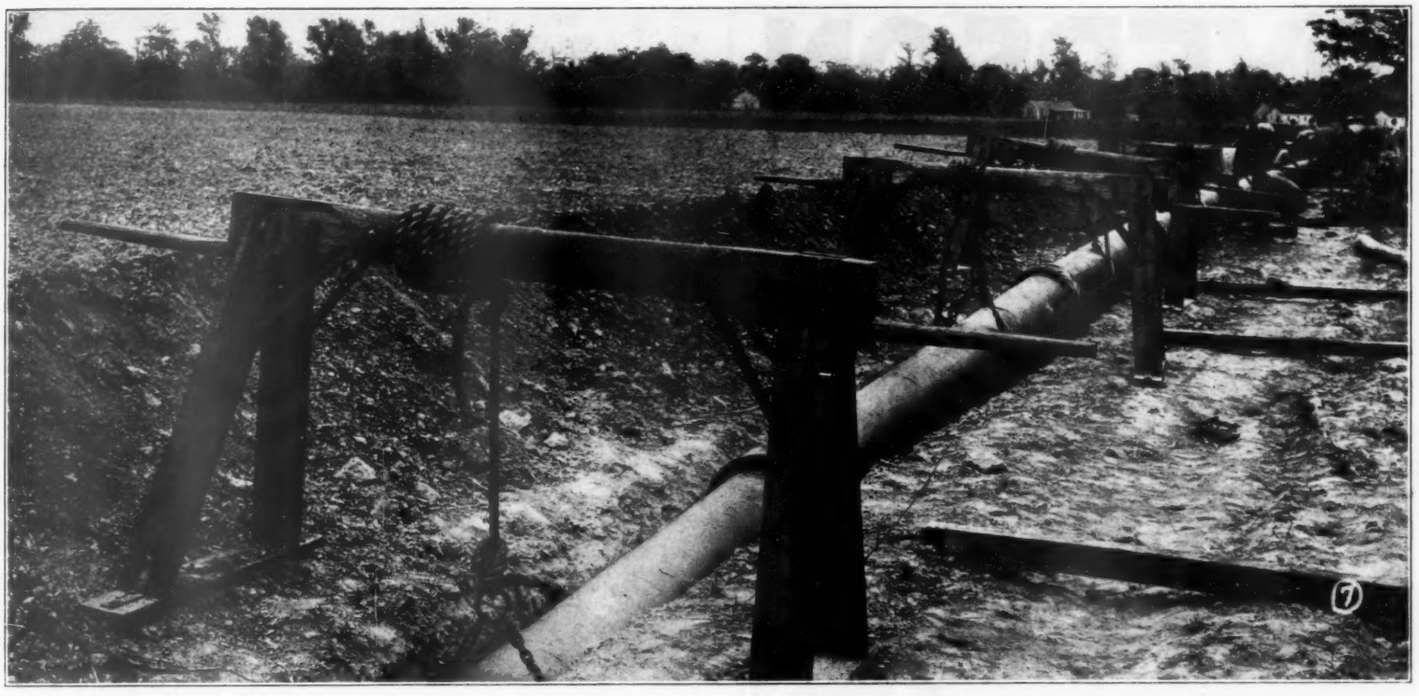
"What I envisage as most likely to happen in the near future, and what I forecast as the normal line of development, is the use of the airship for long distance travel, with the airplane as a subsidiary and feeding service.

"Chamberlain and Levine came down because they ran out of gasoline. Things like that must not happen in commercial service. Again, if service is to be maintained on a commercial basis, airplanes that have crossed direct from America to Europe must be able to fly back direct. And we have still to wait for the pioneer flight that will show that that is feasible."

Lindbergh's Views

Col. Charles A. Lindbergh has recently said some important things about aviation. In Washington he stated: "While I was in England several things were brought to my attention. All Europe looks at our air mail lines with reverence. There is nothing like them. While we have air mail lines, they have passenger lines. While all we have are a few passenger lines, they have many.

"We ought to develop our passenger lines. We are better situated than is Europe. We can make longer flights without crossing international boundaries. What we need more than any other thing to develop our aviation is a series of air ports. I feel sure that if we are given air ports, Europe will look on passenger



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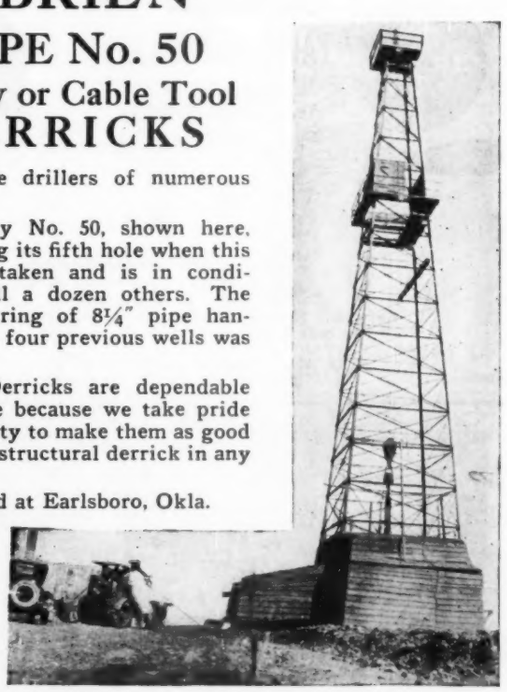

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lines here as they now look on our air mail lines."

Frank H. Hitchcock of New York, postmaster general under President Taft, who established the first air mail route in the United States, states that government assistance should be given in creating air lines for carrying passengers and mail to foreign countries.

Airplanes Used by Oil Industry

One of the first regular commercial airplane services was that started in Colombia, South America, some years ago, by a German company. This service ran between Cartagena, on the seacoast, to Bogata, the capital, some 700 miles inland. It has been carrying mail and passengers regularly, and it was used extensively by oil men in connection with the development by the International Petroleum Co., Ltd., of the DeMares concession, 400 miles from Cartagena. Later, airplane photographic surveys were made of the route of the pipe line from that concession to the coast, built by the Andian National Corp. The airplane service is now being used by oil men in their travels in connection with oil development in the republic.

In the United States, airplanes are used freely by many oil men. The Standard Oil Co. of Indiana has its own plane to transport officials to and from the various points of the vast territory it serves. Many individuals use airplanes for travel in the Mid-Continent fields. Some wealthy oil men have their own private planes for travel, one recently having arrived near New York from the southwest.

Millions of Acres Under Lease for Oil In West Texas Area

HOUSTON, Tex., July 2.—"Oil creates wealth." The truth of this statement is being demonstrated in West Texas, where oil, sulphur and potash have been revealed in commercial quantities by means of the drill.

For many years the value of this territory lay chiefly in its grazing lands. This was the case up to about three years ago, when "wildcatters" invaded the territory and made scattered oil discoveries, which have since been followed up with substantial producing wells.

There are now about 100 wells going down in West Texas at a cost of approximately $2,500,000. Pipe line facilities costing at least $20,000,000 are being constructed into the territory. Land values in West Texas have increased from an average of $5 per acre to at least $25 as a result of the oil, sulphur and potash prospects. As much as $150 or $200 per acre has been paid for oil acreage near production, purchased outright.

Oil geologists years ago were combing West Texas for likely looking territory, and many of them plotted out large blocks of acreage for their respective companies. Needless to say, this activity was looked upon with more or less doubt by the oil fraternity, due to the remoteness from the center of oil operations at that time.

It is the breaking down of this distance barrier that has really made West Texas what it is today. The Humble Oil & Refining Co.'s pipe line to the Big Lake Field placed West Texas in direct touch with the main oil transportation arteries and Gulf Coast oil refineries. Now two additional pipe lines are going to be constructed, independent of the first, completion of which will further advance the development of West Texas into a leading oil producing area.

Humble's Place in Development

The Humble Oil & Refining Co., whose officials have always been optimistic with regard to Texas generally, and West Texas in particular, has had much to do with the actual development of West Texas; not only in leasing and drilling activities, but in the more concrete matter of actually constructing transportation facilities which give the oil produced there an actual, ready market.

Humble's operations in West Texas have been linked closely with the company's position as a leading oil refiner on

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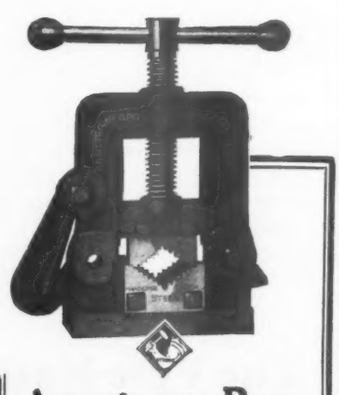

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Borger	Okmulgee
Big Springs	Seminole
Colorado	Tonkawa
Cross Plains	Tulsa
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the Texas Gulf Coast. The new line now being surveyed for the company will run direct from the heart of the West Texas producing area to Ingleside, on the Gulf Coast, and will not connect directly with any other of the company's pipe lines. This will practically give the West Texas area an outlet of its own, independent of other fields, and foreshadows the building up of extensive refining facilities by Humble at Ingleside, when the oil handled by this line begins to flow. The effect of refinery construction will be to provide an actual refining center for West Texas, and will make that territory an early factor in refined oil markets.

In addition, with the completion of the Gulf Oil Corp.'s pipe line from West Texas to the same company's main system from North Texas, West Texas crude will have an outlet to the Port Arthur refinery district. Humble's present line from Big Lake connects with lines running to Houston, and so, in the future, West Texas will have direct connections with all the principal Gulf Coast refineries and terminals.

Land Holdings

The annual report of the Texas Pacific Land Trust for 1926 is of interest as reflecting changes in the situation in West Texas, due to oil development. The Texas Pacific Land Trust was formed in 1888 to administer approximately 3,700,000 acres of land in the State of Texas, which land constituted the property security for bonds previously issued by the old Texas & Pacific Railroad, then in receivership. These lands were originally granted the Texas & Pacific Railroad in part as an inducement for the construction of the railroad through West Texas.

At the close of 1926, the Land Trust had 1,954,793 acres of land situated in 32 counties of Texas. A great part of the original holdings have been disposed of, mostly prior to 1926. The report of sales during 1926 by the Land Trust follows:

County—	Acres	Average price per acre
Culberson	2,975.00	$5.00
El Paso	640.00	10.00
Hudspeth	1,280.00	8.00
Mitchell	1.57	164.24
Nolan	640.00	7.00
Presidio	1,920.00	8.00
Reeves	3.45	20.71
Taylor	320.00	6.00
Total	6,880.02	

These do not include town lot sales.

Of the land owned by the Texas Pacific Land Trust, 229,260 acres were under lease to various oil companies at the close of 1926, or more than 12 per cent. The largest lease holder was the Humble Oil & Refining Co., with over 95,000 acres.

Acreage Owned

The amount of land owned by the trust and amount under lease on December 31, 1926, is stated in the report as follows:

County—	Land owned (acres)	Under lease to oil companies (acres)
Red River	806	.....
Palo Pinto	6,048	.....
Stephens	2,777	720
Callahan	1,280	.....
Taylor	6,800	.....
Nolan	12,363	320
Fisher	9,211	.....
Mitchell	5,785	4,089
Howard	18,411	7,680
Martin	640	.....
Midland	66,042	11,520
Edwards	1,760	.....
Reagan	17,937	6,240
Kent	1,669	.....
Dawson	277	.....
Coke	2,393	.....
Irion	2,172	.....
Sterling	23,691	2,872
Glasscock	47,106	6,574
Crane	13,560	4,560
Upton	42,546	19,080
Ector	71,571	24,700
Winkler	14,161	4,960
Loving	92,268	16,560
Reeves	259,250	66,380
Jeff Davis	94,563	5,667
Culberson	523,888	35,352
Hudspeth	384,571	.....
El Paso	114,062	.....
Pecos	66,922	11,986
Presidio	35,503	.....
Brewster	13,760	.....
Total	1,954,793	229,260

Leasing on Large Scale

The Gulf Oil Corp. and Humble Oil & Refining Co. together are credited with having 3,000,000 acres of land under lease in West Texas. Many other companies have large blocks. The Transcontinental Oil Co. was one of the earlier explorers of West Texas, due to the belief of M. L. Benedum and J. C. Trees in the

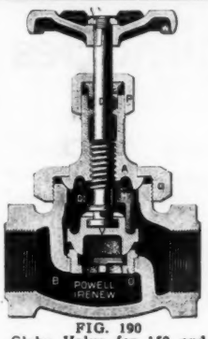

FIG. 190
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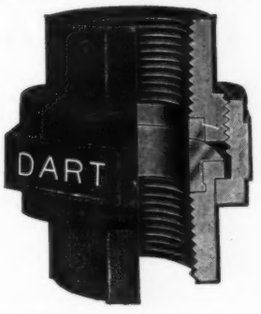

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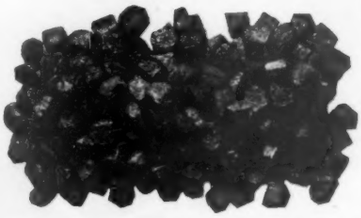

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potentialities of that territory long before there was any active development there. As a result, leases were obtained on approximately 217,000 acres in Regan, Pecos, Upton, Terrell and Crockett Counties. The Mid-Kansas Oil & Gas Co., a subsidiary of the Ohio Oil Co., was given a half interest in 50,000 acres in Reagan, Crockett and Pecos Counties in consideration of drilling three wells free of cost to Transcontinental.

It is now well known that one of the blocks of acreage owned in conjunction with Ohio Oil Co. in Pecos County has proved a sensational producing area, with five producing wells yielding from a depth of a little over 1,000 feet. The potential output of this Pecos County Field has been estimated as high as 200,000 bbls. a day. It has served to attract widespread attention on the part of the oil fraternity to the possibilities of West Texas, and has attracted numerous operators there.

BITUMINOUS SANDS FOR ROAD BUILDING

CHATHAM, Ontario, July 2.—In connection with the development of the tar sand deposits of northern Alberta, the Scientific and Industrial Research Council of Alberta has issued a report in part as follows:

"Observations in United States have confirmed the judgment of the Alberta Research Council that a maximum application of the Alberta bituminous sands to road construction needs in western Canada will be secured by producing a sand-free bitumen from the bituminous sands, and that development of a satisfactory separation process is the key to the situation."

The report, after dealing with the possible uses of the bitumen on graveled and clay roads, which it regards as the chief available market for the present, goes on:

"Bituminous sands similar in composition and bitumen content to those in Alberta occur in California. Considerable quantities of the material have been excavated at Santa Cruz and Carpentaria and used for constructing pavements. In general, pavements made from bituminous sand have given excellent results. Many of them have meen in service for 15 years and some for 30 years.

"In the States, refinery asphalt has replaced bituminous sand on account of being easier to handle. The bituminous sand often gets overheated by inexperienced operators.

"The success of efforts in the United States to use bituminous sands and rock asphalts as paving material encourages the belief that equal success can be achieved with Alberta bituminous sands.

"The Research Council has maintained that the key to the development of the Alberta bituminous sands is separation of the bitumen. Separated bitumen would enter the market with much the same array of selling qualities as its refined asphalt competitor. If it could be sold at a more favorable price it would win out in the competition. The chances of producing the bitumen at a favorable price are good. No local petroleum industry is supplying the Alberta market with a low-priced asphalt. Knowledge of how to separate the bitumen from the bituminous sand is in a very satisfactory state and indications are that the cost will be low."

The report predicts that, as western Canada is in the graveling stage of highway improvement, the demand in the next few years will be for road oils for surface treatment of thousands of miles of graveled main highways; to be followed at a later stage by the constructions of bitumen-surfaced roads.

"Separated bitumen from bituminous sand deposits can enter the market for road oils which this development will create. Bituminous sands, as such, cannot. Earth road maintenance is bound also to create a market for considerable quantities of the oil."

CANADIAN OIL IMPORTS

CHATHAM, Ontario, July 2.—Official figures show that imports into Canada of both crude petroleum and refined products are increasing. For the fiscal year ending March 31, 1927, crude oil

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TEXAS OIL MAPS
County and District
Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

imported amounted to 588,368,000 imperial gallons, valued at $29,408,000; while refined products for the same period totaled 106,114,000 gallons valued at $16,605,000. This represents an increase over the previous year of around $1,700,000 worth of refined products and $6,000,000 worth of crude.

HOUSEHOLD HEATING BY PETROLEUM COKE

(Continued from Page 142)

a 10-room home and 6½ tons were consumed. The total fuel bill was $52 and although the winter was unusually mild, the cost is very low for a house of that size. To get these results it is necessary to give the furnace some attention once daily when feeding the fire. If the furnace is equipped with grates, the only change in the fire box necessary to burn coke is to cover the grates with fire brick. This is best done by quartering the ordinary fire brick and laying the pieces on the grates loosely but as close together as possible. This adequately protects the grates and still leaves sufficient space between the edges to supply air. This lining usually needs to be set twice a year, once new at the beginning of the season and in part after about three months' use.

The principal differences between a coke fire and a coal fire is that the coke burns very slowly free of flames, can not be pushed rapidly, generates a very intense localized heat, requires very little draft, and needs to be refueled about one-third as often as a coal fire. The fire box should be kept filled to the door-level with clean fuel and the surface of the bed kept level. When coke is added it should be thrown over the entire surface evenly. Except when clinkers form as a result of burning inferior coke, the fuel bed should not be disturbed and when shaking down the ashes, only a slight shifting of the grates is necessary. The shaking should never be sufficient to disturb the brick lining and does not need to be prolonged as the total amount of ash per ton of coke will not exceed 12 pounds. The choice of suitable coke is essential also and only the hard, porous, dry coke may be used with entire satisfaction. Along with coal, it has the disadvantage of being easily carried through the house by clinging to the shoes and in comparison to coal is much worse than coal. With a little care, however, the furnace room floor can be kept clean enough to remove this trouble.

FRENCH BENZOL PRODUCERS

Under the name of the French Union of Benzol Producers (Union Francaise des Producteurs de Benzol) the principal French producers of benzol have just organized a trade association for research into all technical phases of the developments of this industry, both as regards production and utilization of benzol, as well as a survey of the methods which can be employed in developing the use of benzol products. The president of this new organization is H. Laurain of the Societe de Gaz de Paris, and the vice presidents are: A. Baril of the Societe d'Eclairage, Chauffage et Force Motrice, and E. Perilhou of the Societe Huiles, Goudrons et Derives. The members of the Union are the Comptoir de Benzols, the Societe de Chatillon-Commentry et Neuves-Maisons, and the Societe Anonyme des Mines de la Loire. Mr. Brunschwig, chief engineer of the Bureau of Mines, has been elected chairman of the directing board.

VENEZUELA-GULF CUTS WORK

HOUSTON, Tex., July 2.—Advices from Venezuela state the Venezuela-Gulf Oil Co., a subsidiary of the Gulf Refining Co., has reduced the number of drilling rigs in Lake Maracaibo from 48 to 6. The company has a daily average production of 50,000 bbls. and has 3,000,000 bbls. in storage. It is building more storage tanks. The company is doing very little development work in Colombia or Panama.

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for April

Company—	Month	Daily Av.
*Prairie P. L. Co.	4,380,000	146,000
Gulf P. L. Co.	1,583,963	52,799
Texas P. L. Co.	941,632	31,388
Magnolia Pet. Co.	1,562,069	52,069
Cosden P. L. Co.	1,078,448	35,948
*Sinclair P. L. Co.	2,490,000	83,000
Empire P. L. Co.	1,041,497	34,717
*Other lines	12,720,000	424,000
Total April	25,797,609	859,921
Total March	26,152,714	843,636
Difference	355,105	16,285

Shipments

†Prairie P. L. Co.	5,484,826	182,827
Gulf P. L. Co.	1,288,099	42,936
Texas P. L. Co	645,712	21,528
Magnolia Pet. Co.	1,286,241	42,875
Cosden P. L. Co.	954,712	31,824
†Sinclair P. L. Co.	2,537,233	84,574
Empire P. L. Co.	1,177,622	39,254
*Other lines	11,400,000	380,000
Total April	24,774,454	825,818
Total March	24,880,289	802,589
Difference	115,835	23,229

Stocks

*Prairie Oil & Gas Co.	30,000,000
*Prairie P. L. Co.	2,000,000
Gulf P. L. and Gypsy Oil Co.	8,257,305
The Texas Company	4,248,791
Magnolia Pet. Co.	4,833,023
Cosden P. L. Co.	2,446,239
*Sinclair Crude Oil Pur. Co.	19,400,000
Empire P. L. Co.	2,695,213
Carter Oil Co.	14,657,522
*Other lines	10,500,000
Total April	99,083,093
Total March	96,459,101
Difference	2,623,992

*Estimated. †Prairie Pipe Line shipments include Texas crude and Sinclair Pipe Line shipments include Wyoming and Texas crude. Note—Stocks do not include approximately 3,500,000 bbls. of crude oil held in storage on private tank farms and leases and approximately 2,500,000 bbls. of Texas Panhandle crude in storage in Oklahoma and Kansas.

EASTERN PIPE LINES
Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar. '27	Apr. '27
Nat. Transit	163,378.73	154,870.84
S. W. Pa. P. L.	100,692.96	88,641.89
Eureka P. L.	416,053.14	384,040.85
Buckeye P. L. (Macksburg)	340,086.67	320,728.39
Buckeye P. L. (Cleveland)	12,262.69	11,229.68
Buckeye P. L. (Lima, etc.)	126,642.07	117,721.95
Indiana P. L.	10,472.58	10,277.07
Cumberland P. L.	276,896.95	257,132.67
N. Y. Transit	24,065.99	22,203.37
Tidewater P. L.	189,659.31	178,148.47
Pure Oil	175,516.93	167,608.74
Emery P. L.	57,577.05	54,707.36
Paragon Dev.	29,944.63	27,120.07
Pittsburgh P. L.	5,324.14	5,667.22
Stoll Ref.	12,195.78	.....
Total	1,960,669.62	1,810,098.57
Daily average	63,247.41	60,336.60

Note: Indian Refining Co. also reported other receipts of 320,788.98 bbls. Paragon Refining Co. had other receipts of 114,945.43 bbls. Paragon Development had other receipts of 1,682.19 bbls. Pure Oil had other receipts of 9,751.43 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar. '27	Apr. '27
Nat. Transit	371,407.93	291,282.87
S. W. Pa. P. L.	394,577.29	358,167.37
Eureka P. L.	186,306.27	165,326.49
Buckeye P. L. (Macksburg)	162,229.20	170,657.32
Buckeye P. L. (Cleveland)	1,218.35	975.08
Buckeye P. L. (Lima, etc.)	851,500.60	945,498.20
Indiana P. L.	995,741.13	963,978.82
Cumberland P. L.	128,346.83	125,745.62
N. Y. Transit	97,577.19	164,631.87
Northern P. L.	161,689.55	181,685.31
Tidewater P. L.	103,290.33	118,938.50
Pure Oil	158,078.86	181,289.98
Emery P. L.	55,642.19	56,289.21
Paragon Ref.	103,362.66	113,995.67
Indian Ref.	329,602.47	331,923.45
Paragon Dev.	35,811.95	30,782.89
Pittsburgh P. L.	5,715.31	5,626.88
Total	4,147,099.11	4,206,795.53
Daily average	133,777.39	140,226.52

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of March and April were as follows:

	Mar. '27	Apr. '27
Nat. Transit	987,165.64	1,122,327.78
S. W. Pa. P. L.	716,181.84	736,241.91
Eureka P. L.	1,438,177.29	1,429,347.79
Buckeye P. L. (Macksburg)	457,603.45	438,197.58
Buckeye P. L. (Cleveland)	41,573.95	42,148.71
Buckeye P. L. (Lima, etc.)	3,545,161.61	3,868,077.13
Indiana P. L.	592,303.39	598,145.91
Cumberland P. L.	583,281.33	587,606.67
Southern P. L.	458,081.93	421,389.46
N. Y. Transit	803,826.11	750,482.15
Northern P. L.	485,204.86	448,142.25
Pure Oil	498,169.44	495,796.06
Emery P. L.	7,599.54	6,418.11
Paragon Ref.	27,096.71	27,679.47
Indian Ref.	141,081.41	130,280.76
Paragon Dev.	8,085.46	6,239.54
Pittsburgh P. L.	3,449.67	3,773.55
Total	10,794,043.63	11,112,294.83
Increase	674,881.27	318,251.20

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of March and April, showing the gross stocks of the above fields:

	Mar. '27	Apr. '27
Pennsylvania	3,731,445.01	3,761,619.39
Lima	810,425.15	839,740.90
Kentucky	1,067,209.97	1,143,953.67
Mid-Continent	5,041,917.37	5,269,128.72
Illinois	143,046.13	97,852.15
Total	10,794,043.63	11,112,294.83

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1924	1925	1926	1927
January	62,638	56,831	55,630	56,209
February	68,023	60,606	60,394	61,298
March	68,721	60,575	61,644	63,247
April	71,068	63,062	63,019	60,327
May	63,942	59,217	60,580	.....
June	63,230	61,270	64,131	.....
July	64,208	62,639	63,206	.....
August	59,942	59,686	61,815	.....
September	62,930	62,510	64,639	.....
October	64,976	60,995	62,704	.....
November	66,282	59,350	61,774	.....
December	65,814	57,974	58,755	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1924	1925	1926	1927
January	145,518	157,889	156,056	141,227
February	148,732	160,863	159,488	138,534
March	147,098	154,591	150,239	133,777
April	147,611	151,429	152,371	140,227
May	134,997	146,998	160,998	.....
June	143,010	149,467	160,257	.....
July	124,187	161,338	160,945	.....
August	123,120	161,730	151,929	.....
September	127,325	156,719	158,915	.....
October	123,170	145,388	161,132	.....
November	124,400	143,582	152,668	.....
December	151,392	150,162	136,428	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1925	1926	1927
January	11,353,276	9,859,170	9,718,008
February	11,192,924	9,579,354	10,119,162
March	11,158,297	9,438,292	10,794,044
April	11,062,082	9,806,851	11,112,294
May	11,207,562	9,531,757	.....
June	11,093,796	9,585,904	.....
July	11,067,453	9,734,687	.....
August	10,974,481	9,668,947	.....
September	10,781,753	9,433,732	.....
October	11,086,850	9,269,806	.....
November	11,068,158	9,257,667	.....
December	10,458,445	9,454,512	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above.

1926—	Runs	Shipments	Stocks
April	3,137.40	4,519.68	12,459.02
May	2,933.29	2,096.35	13,295.96
June	3,217.62	1,655.15	14,858.43
July	3,025.86	4,075.11	13,809.18
August	2,886.59	2,121.21	14,574.56
September	2,788.18	3,373.06	13,986.68
October	2,991.86	2,307.75	14,671.25
November	2,810.60	1,664.55	15,817.31
December	2,847.52	5,561.11	13,103.72
1927—			
January	2,641.54	1,470.42	14,274.84
February	2,764.30	1,082.82	15,956.32
March	2,587.20	1,878.56	16,664.96

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks May 1	2,476,177.30
Runs from wells	642,805.62
Other receipts	131,751.15
Regular deliveries	382,195.92
Other deliveries	479,034.86

The amount of Illinois oil run by the Tidewater Pipe Co. in April was 50,420.35 bbls. and deliveries were 62,622.57 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1926—	Runs	Deliveries
April	610,957.04	487,604.00
May	682,416.67	498,456.90
June	693,102.34	558,054.94
July	713,490.66	490,092.82
August	701,795.92	555,766.59
September	688,798.66	516,083.05
Ocotber	631,648.96	531,467.39
November	651,263.33	498,439.87
December	668,909.58	587,947.61
1927—	Runs	Deliveries
January	621,421.03	530,085.98
February	595,831.16	476,950.71
March	727,593.91	554,947.43
April	593,226.97	444,818.49

Tidewater Pipe Co., Ltd., also delivered in April, 191,291.56 bbls.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
February	26,214	3,036	32,750	8,871	18,256	88,821	.....	.....	.....	.....	.....	88,821
March	16,616	5,424	56,710	13,871	13,419	106,097	.....	.....	.....	484	.....	106,581
April	12,667	4,367	47,667	15,100	13,300	93,100	.....	.....	.....	.....	.....	93,100
May	10,452	7,645	18,387	9,226	6,226	51,936	.....	.....	.....	.....	.....	51,936

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
February	12,000	14,429	87,286	5,321	26,714	145,750	4,786	46,786	2,142	3,607	57,322	203,072
March	4,677	13,161	63,484	9,226	26,129	116,677	6,742	36,258	2,419	4,871	50,290	166,967
April	22,700	9,033	62,033	6,067	26,567	126,400	5,067	18,033	.....	.....	23,100	149,500
May	21,032	9,807	93,452	7,774	23,580	155,645	1,807	30,612	1,936	.....	34,355	190,000

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

1926—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
May:	Month	18,667,144	14,507,008	11,940,797	3,516,640	5,482,939	2,231,938	3,459,489	3,317,000	63,122,955
	Daily average	602,166	467,968	385,187	113,440	176,869	71,998	111,596	107,000	2,036,224
June:	Month	18,269,417	14,073,510	11,782,200	3,346,470	5,064,760	2,206,830	3,437,905	3,365,000	61,546,092
	Daily average	608,981	469,117	392,740	111,549	168,822	73,561	114,597	112,167	2,051,536
July:	Month	18,743,199	14,657,482	13,983,759	3,582,267	5,019,892	2,173,813	3,336,664	3,420,000	64,917,076
	Daily average	604,619	472,822	451,089	115,557	161,932	70,123	107,634	110,323	2,094,099
August:	Month	18,765,080	14,618,236	17,093,586	3,681,436	4,878,191	2,190,739	3,457,697	3,339,500	68,024,465
	Daily average	605,325	471,556	551,406	118,756	157,361	73,896	111,538	107,726	2,194,338
September:	Month	18,104,954	14,466,510	17,580,100	3,450,060	4,603,230	2,079,840	3,141,123	3,330,000	66,755,817
	Daily average	603,498	482,217	586,003	115,002	153,441	69,328	104,704	111,000	2,225,194
October:	Month	18,966,058	15,720,689	19,001,388	3,714,637	4,625,138	2,166,559	3,071,720	3,398,000	70,664,189
	Daily average	611,808	507,119	612,948	119,827	149,198	69,889	99,088	109,613	2,279,490
November:	Month	19,173,128	16,876,950	18,593,160	3,593,490	4,299,480	2,054,911	2,842,587	3,216,000	70,649,706
	Daily average	639,104	562,565	619,772	119,783	143,316	68,497	94,752	107,200	2,354,990
December:	Month	20,276,950	17,882,908	19,753,591	3,654,156	4,266,189	2,018,734	2,658,301	3,313,000	73,823,829
	Daily average	654,095	576,868	637,212	117,876	137,619	65,120	85,752	106,871	2,381,414
1927—										
January:	Month	20,184,872	19,030,745	18,546,990	3,668,323	4,076,469	1,905,570	2,610,303	3,332,500	73,355,772
	Daily average	651,125	613,895	598,290	118,333	131,499	61,471	84,203	107,500	2,366,316
February:	Month	17,982,711	19,752,348	16,483,292	3,349,416	3,574,256	1,784,104	2,385,135	3,007,200	68,318,462
	Daily average	642,240	705,441	588,689	119,622	127,652	63,718	85,183	107,400	2,439,945
March:	Month	19,835,724	22,480,921	18,417,100	3,672,849	3,853,920	1,896,425	2,466,798	3,630,800	76,244,537
	Daily average	639,862	725,191	594,100	118,479	124,320	61,175	79,574	116,800	2,459,501
April:	Month	19,466,087	22,289,160	17,806,740	3,530,490	3,378,240	1,994,730	2,615,770	3,474,000	74,549,217
	Daily average	648,870	742,972	593,558	117,683	112,608	66,491	87,192	115,800	2,484,974
Total 12 month		228,435,324	206,356,467	200,976,703	42,760,234	53,122,704	24,696,090	35,483,492	40,133,000	831,964,014
		625,860	565,360	550,621	117,161	145,541	67,661	97,215	109,953	2,279,353

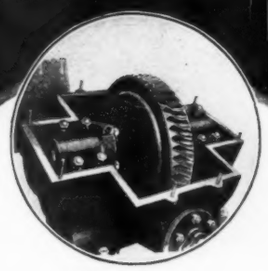
THOROUGHBRED

Thoroughbred means "bred from the best." Few winners are bred any other way.

It is much the same in pumps. Strong, efficient, durable pumps are usually the result of the "stock" from which they come—and the skill with which such stock is handled.

To be sure of good stock, we operate our own foundry. To be sure of careful handling we insist that every GASO workman go through an exacting course of training. That we are running a winning race is indicated by the frequent additions we are making to our manufacturing facilities.

GASO PUMP & BURNER MFG. CO.
TULSA · OKLAHOMA



A Winner Right From the Start

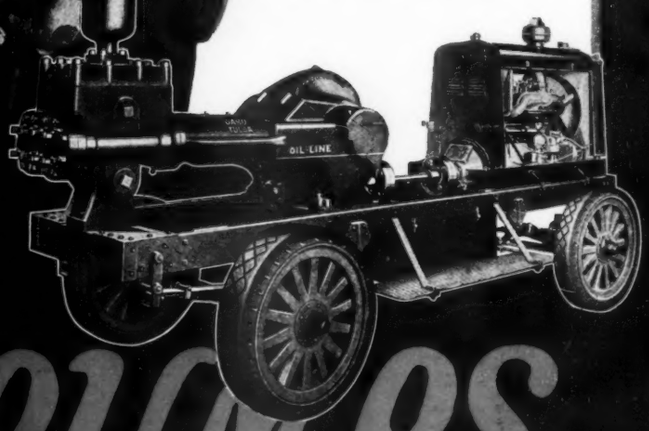
Three hours after the GASO Portable Pumping Unit made its official bow to the oil industry [at the 1925 Petroleum Exposition] a forward-looking oil company had bought it.

Six months later, as the operation of this unit became generally known, orders were taxing production facilities.

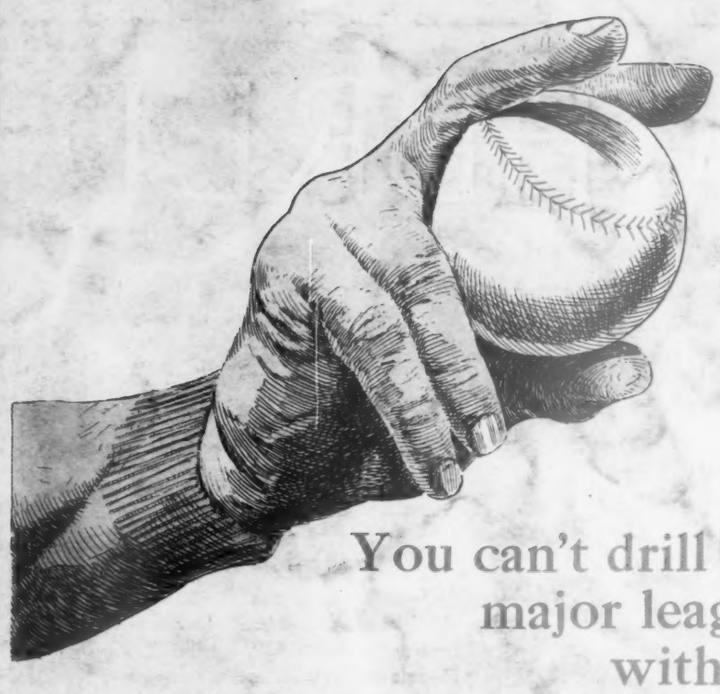
Today a 50% addition is being made to our plant—largely because of the demand for the Portable Unit.

Here is a Portable, Self-Lubricating, Worm-Drive Pump, designed for all types of emergency service. Ideal for "pickup" in pipe-line breaks; extensively used in Seminole for water service; ready for operation anywhere, at any time.

Capacity, from 45 barrels at 800 pounds pressure to 250 at 275 pounds pressure. Buda, 40-horse-power motor. Furnished complete on trailer or skids. Ask us for further information.



GASO PUMPS
for every oil industry need



You can't drill major league holes with minor league tools

YOU can't use minor league tools in the days of mile-deep major league holes. The Bridgeport line offers more for your money and less likelihood of fishing jobs than tools made under ordinary methods of manufacture.

It was Bridgeport which developed the Swan Underreamer, which has seen service and proved worthy in every country under the sun where oil has been found.

It was Bridgeport which developed the process of hychroming steel. It was Bridgeport which gave to the oil world the first drilling bit with a guaranteed pin, and when a better bit in its entirety is made it will still carry Bridgeport's name on the wrench square.

You may not be a baseball fan, but you will readily appreciate the fact that you can't drill major league holes with minor league tools.

THE BRIDGEPORT MACHINE COMPANY
WICHITA, KANSAS

Branches and Selling Agents Throughout the Oil Fields